The role of communities of practice in shaping modernisation: A case study of change, persistence, and survival in the UK cockle-fishing industry 2011-2018.

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I certify that all material in this dissertation which is not my own work has been identified and any material that has previously been submitted and approved for the award of a degree by this or any other university has been acknowledged.

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Chapter 1 Introduction

In this introductory chapter are all the essential elements necessary to set out the theoretical argument, the scholarly contribution, and the preliminary background information. The thesis is about occupational communities and Communities of Practice (CoP). This chapter helps to clarify the focus of the study and contextualise the research. Most important of all here are the research aims and objectives of the study. The objectives are made explicit regarding what each objective entails, how the researcher will achieve them, and how they relate to the research process and the aims of the thesis.

1.1 Background context

Given that work is such a fundamental part of most people's lives it is not at all surprising that the study of human activity in the workplace has become a central concern for scholars. One tradition now seemingly popular with Management and Organisation scholars interested in the study of work is practice-based theory. Management and Organisation scholars who adopt a practice-based ontology study organising as a social process as opposed to the organisation as an entity.

In this way, the ontological object of inquiry becomes the interplay of social interaction and practical action in the workplace (Nicolini, 2012). Some early industrial sociologists used this approach to analyse the relationship between work and leisure. Hughes (1956) for example applied the term occupational communities to the systematic analysis of people engaged in social interaction in field studies of work and work group affiliations.

A more contemporary research stream in this tradition is the study of work associated with learning (Lave and Wenger 1991; Brown and Duguid, 1991; Orlikowski, 2002). In this regard, a propagated practice-oriented framework

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useful for accounting for such phenomenon in work contexts is communities of practice (CoP). CoP theory has been widely used to explain practitioner learning in different work contexts since the early 90's. Initially CoP was utilised as an analytical tool, but by the early 2000's Management and Organisation scholars were suggesting, as management consultants, that CoP could be used as a knowledge management tool for performative purposes (Roberts, 2006).

Although scholarly interest in CoP subsequently waned in Management and Organisation studies, Wenger's (1991) conceptualisation remains a dominant influential way to conceptualise the intricate relationship between work and learning in organisations (Lindkvist, 2005). The notion that these two elements are not disjointed but rather learning is part of work, and work is a source of learning is at the heart of Lave and Wenger's (1991) original CoP treatise.

However, whereas much is already known about CoP theory and its utility as a conceptual framework, probably more scholarly time and effort has gone into researching communities within and between all types of organisations than the direct study of occupations (Anteby, Chan, and DiBenigno, 2016). This tendency towards organisation forms of CoP means that occupational communities are manifestly a rare find in the Management and Organisation literature.

Even where there is interest in occupational communities, scholars foreground issues of dissonance and social confrontation with the result that, occupational communities are only really understood in terms of organisational-occupational tension. Consequently, there is very little theoretical perspective on work activity and social interaction which plays out in what Salaman (1974) characterises as an occupational community without a parent organisation. This is borne out by Nicolini, Pyrko, Omidvar-Tehrani, and Spanellis (2022), who establish that

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Management and Organisation scholars have yet to establish a link between CoP and occupational communities.

If organisations were either the only or perhaps the most important settings for understanding work and worker practice this situation would not be at all remarkable. The fact is however that a CoP studied in an occupational setting, as a comparative frame of reference (Hughes, 1970), could reveal a conception about the nature of work and worker relationships which is characteristically different to a CoP within an organisation. Particularly as an occupational community operates in an environment relatively untroubled by the structural constraints which wrap around organisations (Van Maanen and Barley, 1984).

In this respect, some Management and Organisation scholars (Nicolini et al., 2022 for example), recognising this upcoming connection as a promising avenue for further research, consider it relatively important to study this conceptual overlap between CoP and occupational communities. Following this line of thinking, this thesis will develop an alternative to Wenger's (1991) organisationally oriented framework to illustrate an occupational community who share a specific work situation comprising multiple employing organisations.

Therefore, with an empirical focus on a single community of practitioners experiencing what Salaman (1974) refers to as, locally structured occupational work, out of the organisation spotlight, this thesis responds to the call to join the conversation about occupational communities as an adjoining branch of CoP theory (Nicolini et al., 2022). The aim is to yield insights about the social interaction and mechanisms of coordination employed by practitioners engaged in modernisation. In other words, a local occupational community (Salaman, 1974) whose work has been transformed by mechanisation and technology. In

summary therefore, the idea is to combine different aspects of CoP and occupational communities to investigate a community of practitioners who share a specific work situation albeit with contrasting and competing reference points.

Within Management and Organisation studies Van Maanen, Miller, and Johnson (1982) and, Barley and Orr (1997), writing about commercial fishing and technical work respectively, are among the few who attempt to distinguish between CoP and occupational communities. Occupational communities assert Barley and Orr (1997), resemble a distinctly social and collaborative dynamic form of social interaction and action which is uncharacteristic of CoP embedded in organisations. Thus, there is merit in examining social dynamics and work of a technical nature where activity coalesces around practice in an atypical setting. The question of whether a CoP amidst an occupational milieu, outside an organisation or an organisation function, sits in a quandary or can function more effectively certainly presents an interesting paradox to investigate. Correspondingly, the image of people working together primarily because of their connection with the occupation in question, whilst confounding the legitimacy of organisational affiliation, offers an alternative way of approaching the study of CoP.

Expressly the thesis offers a description of the lives of a distinct occupational community involved in the same sort of work, bound together not by organisational arrangements, but by a belief and a mandate to carry on specific practice (Weir, 1974). Principally what is designated an occupational CoP in this study, has come into being because it's members, share experiences and a specific work situation, plus activities, and resources with people they identify with as a way of learning how to get things done. Valuable to our comprehension in

this regard is, to paraphrase Wenger (1998), the notion of practitioners bound together by their practice who thereby constitute an occupational CoP.

The specific type of practice reported upon in this thesis is commercial shellfish work. More precisely, the work effort of a distinct occupational group's experience of endurance and change within the UK shellfish industry. Focusing on the capacity of an established community to withstand a sustained period of modernisation, this study examines what the shellfish merchants need to know and do to harvest and process their commercial catch. The importance and originality of this study are that it builds a conceptual argument about collective action and workplace learning in relation to modernisation through an occupational CoP lens.

Communities of practice as a broad thesis topic to be investigated empirically through studying others' work practices emerged in the early stages of field work. An opportunity to investigate people who are rooted in local traditions and engaged in activity in a historically unique and interesting field of work presented both a physical setting and a researchable problem. Whilst living near to an important UK fishery the researcher developed a sharpened interest in this area. Close to collapse in the 1980s, the survival of this since-modernised, small but vibrant fishery, and what those working within this fishery do together is the impetus for the study.

More specifically, while developing a case study, called Leigh-on-Sea Cockle Fishery, a collective of independent shellfish merchants who harvest cockle beds along the estuary of the River Thames came under scrutiny. Harvesting these bivalve molluscs commonly found in estuaries is an important and distinctively regional economic activity in the UK. Shellfish merchants involved in this practice

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depend largely on their routine circumstances, and their cultural norms and accomplished methods. Albeit some of these methods have been either made redundant or enabled by technology in the form of mechanisation.

To explain this occupational community's capacity to think and act together to sustain cockle harvesting and processing practice, the researcher adopted a qualitative approach designed to yield observational and informal ethnographic interview data. In addition to observational data this involved relying on what the participants revealed about getting the job done and solving unique sets of everyday problems encountered when harvesting and processing shellfish. This was essential for understanding the intermediate steps of the changes that have taken place over time and the resultant modernisation. The key conceptual argument of this thesis is developed from consideration of this contrast.

In short, the study will describe the practice and social interaction found in a common purpose occupational domain to illustrate the nature of the connection between workplace learning, collective action, and modernisation.

1.1.1 Contribution to Knowledge

CoP is a pertinent construct in respect to Management and Organisation studies because it permits the researcher to theorise about structure, culture, everyday activity, and collective action on multiple levels within and between organisations. Intended as a meso-level theory which seeks to explain the process and outcome in contexts involving practitioners, socially interacting with others, and acting within a structure, CoP intricately links learning and work (Wenger, 1998). However, an unresolved issue connected to CoP studies remains the treatment of occupational communities.

In this regard there are two important areas where this study makes an original contribution to CoP research. First and foremost is the potential contribution on a conceptual level. The thesis attempts to show that whilst CoP have been studied by many researchers within and between organisations, the nature of the source of collective action and relational dynamics among occupational communities is far from clear. Liberating CoP from the conventional context in which they are enacted, namely organisations, the characterisation of occupational CoP as outlined in this study can provide an alternative template for theorising about the dynamics of learning and/in work. Or, to make this point more strategically, because of synthesising two adjacent literatures (CoP and occupational communities) this thesis can offer a nuanced theoretical perspective (Thatcher and Fisher, 2022) on divergent types of communities and their work practice which, in turn may energise Management and Organisation scholars and thus constitute a contribution to theory.

For instance, the thesis asserts that occupational practice which has been taken for granted and may appear static can be contested (negotiated), even overturned in environments relatively less incumbered by structural constraints, organisational control and managerialism. This notion of practitioners collectively engaged in collaborative leaning and innovation for the betterment of their occupation is an important consideration in this regard.

1.1.2 Significance of the study

The importance and originality of this study are that it conceptualises a localised view of an occupational CoP (OCoP) whose members collaborate and innovate to sustain their practice. This integrated conception of a functioning conjoined occupational community and CoP provides a view of social relationships and

interdependent learning in work contexts without the usual organisational-occupational tension. This line of theorising could offer a more effective way to understand work and learning in relation to practice. Moreover, this demonstrates how the thesis might contribute to the conversation started by Nicolini et al. (2022, p. 52) about the ''conceptual overlaps'' between what have traditionally been regarded as two disparate literature sets.

Furthermore, the empirical context considers, for the first time, a practitioner perspective on the conditions for modernisation and change in the UK shellfish industry. Such circumstances of modernisation inevitably bring complexity and change as work will rarely be done in the same way as it was prior to being modernised (Barley and Orr, 1997). Given that the Leigh-on-Sea work situation appears to example this expression and offers the opportunity to examine empirically the relationship between occupation and modernisation, this adds further significance.

More generally, the cockle fishery represents a trajectory of modernisation and change within the occupational realm of commercial shellfish harvesting and production. Thus, as an object of analysis the pressure on traditional, taken-for-granted practice competing with modernisation presents a pertinent set of conditions for studying the efforts of small-scale fisheries to sustain their practice. From an empirical perspective the opportunity to look closely at an occupational community which operates outside an organisation is also an important factor.

Furthermore, a major shellfish policy initiative launched by the National Federation of Fishermen's Organisation (NFFO) in 2019 seeks consultations on the future of shellfisheries' management and the challenges and opportunities of

technological development across the sector (Fishfocus, 2020). In this respect the results from the study may contribute to shaping shellfish policy.

1.2 Case study

The coastal waters of the UK offer a variety of commercial fishers a rich diversity of fishing opportunities. Whilst there is some regional variation within the sector, the importance of small-scale commercial fisheries is incontestable (Chuenpagdee and Jentoft 2019). In the UK, a larger than average proportion of commercial fishing enterprises (93%) employ fewer than 5 workers (UK Fisheries Statistics, 2020).

Contemporary forms of commercial fishing are characterised by repetitive, routine seasonal work. As such, fishing as an occupation can offer potential opportunities for an enterprise to automate their processes. Indeed, commercial fisheries have a long legacy of integrating variable forms of traditional and modern fishing practice associated with regulatory, technological, and social change (Van Maanen, Miller, and Johnson, 1980).

Predictably however, some sectors of commercial fishing are more technologically advanced than others. As a distinctive subdivision of the small-scale commercial fishing sector, the occupation of shellfish harvesting and production has not lagged behind. In recent years, for instance, some shellfish businesses have noticeably altered their practice along a course of modernisation to maintain high standards of consumer protection. The Leigh-on-Sea shellfishery in the southeast of England is notable in this regard. The term shellfishery is used here to denote the Thames Estuary cockle beds and the geographical location of the infrastructure associated with harvesting and processing cockle.

The Leigh-on-Sea shellfishery was selected precisely because it has been especially responsive to modernisation; traditional tools, compared to present-day mechanisation, were modest, whereas present-day shellfish merchants operate specialised fishing vessels and use highly automated methods of production. In contrast, their forefathers gathered cockles on the ebb of the tide using handheld rakes and processing raw cockle was labour intensive work using large hand sieves. These now redundant traditional techniques and tactics as well as the tools employed contrast starkly with current practice.

What has happened in cockle fisheries appears to mirror what has occurred more generally in the fishing industry. Modernisation of commercial fishing has been a major factor in the rapid growth of the UK shellfisheries sector in recent years (Fishfocus, 2020). Over the past 50 years (1968 -2018) this expansion has grown in keeping with the technological transformation experienced in the commercial sector more broadly. This quite extraordinary uptake and impact of technology in commercial fishing (Holm, 2001) makes this particular time-period an interesting one to study.

In the UK, within the shellfisheries sector, the switch from simple hand-raking of cockle to continuous hydraulic suction dredging in 1968 and later, the development of a solids handling pump, exemplify the scale of this mechanisation that has taken place (The Ministry of Agriculture, Fisheries and Food, 1972). However, it is not only the shellfish practice of harvesting cockle that has been affected by ongoing technological change.

In the 1980s, in response to changing health and safety requirements of edible cockle production, and to mitigate the impact of diarrhetic shellfish poisoning (DSP), shellfish merchants sought to automate local cooking and processing

capacity (osbornebros.co.uk). Washing and cooking raw cockle, which had been a very labour-intensive practice, was transformed into a highly automated process requiring virtually no human intervention. Where cockle merchants owned or rented waterside sheds, these were reconfigured to serve as small-scale processing units, or micro-factories (osbornebros.co.uk).

In addition to new techniques and in line with successive examples of modernisation in the UK's cockle fisheries, a need has arisen to control the rate of exploitation of wild cockle stock. Michael Callon's (1984) sociological study of scallops and the fishermen of St Brieuc Bay in France shows the consequences of all year-round commercial dredging of ocean floors without allowing shellfish sufficient time to reproduce. Policy change has resulted in fisheries adopting an increasingly contingent approach to fish stock management.

In Europe, policy comes in the form of catch limits for most commercially fished stocks, which are set annually (European Commission, 2020). In England, this responsibility currently (2020) falls to the Government's Inshore Fisheries and Conservation Authority (IFCA). Regarding shellfish more specifically, these regional IFCAs are responsible for governance of such matters as the protection of young stock (spat), avoidance of over-fishing and minimising shellfish damage rate and reducing wastage (shellfish.org.uk). In the UK, the practice of commercial shellfish harvesting and production is now restricted to a handful of licensed and managed small-scale cockle fisheries.

The Leigh-on-Sea fishery comprises a geographic concentration of 9 of 14 Thames Estuary licensed, independent shellfish merchants occupying a single site at Leigh-on-Sea, Essex. The port of Leigh is famous for its cockles (Bride, 1992), and over generations the Leigh-on-Sea fishery has exploited this

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important natural asset. The survival of the Leigh-on-Sea shellfishery, and indeed the survival of the Thames Estuary cockle beds on which the shellfish merchants' livelihoods depends, is therefore of great economic, environmental, and social importance.

Set up in 2011, the IFCA is the chief regulator of all fishing within 9 miles of England's shoreline. The Leigh-on-Sea fishery falls under the regional jurisdiction of the Kent and Essex Inshore Fisheries and Conservation Authority (KEIFCA), whereby vessels operating from the port of Leigh-on-sea are permitted to dredge for cockle within the boundary of The Thames Estuary Cockle Fishery Regulating Order (TEFCO) (lr.org).

The jurisdiction of the TECFO is indicated in Figure 1 below, as is the high level of activity for 2017 centred on areas close to the Leigh fishery (areas 4, 5a, 6 and 8).

Figure 1 TECFO (KEIFCA, 2017)

Kent & Essex IFCA Inshore Fisheries and Conservation Authority

Heat map showing the 2017 activity of TECFO Cockle Fishery

☐ Essex Estuaries SAC
TECFO Cockle Areas
☐ As numbered

Scale: 1;125,000
Projection: WGS 84 UTM 31N
ID: RD03204052018

0 2.5 5 7.5 10 12.5 15 km
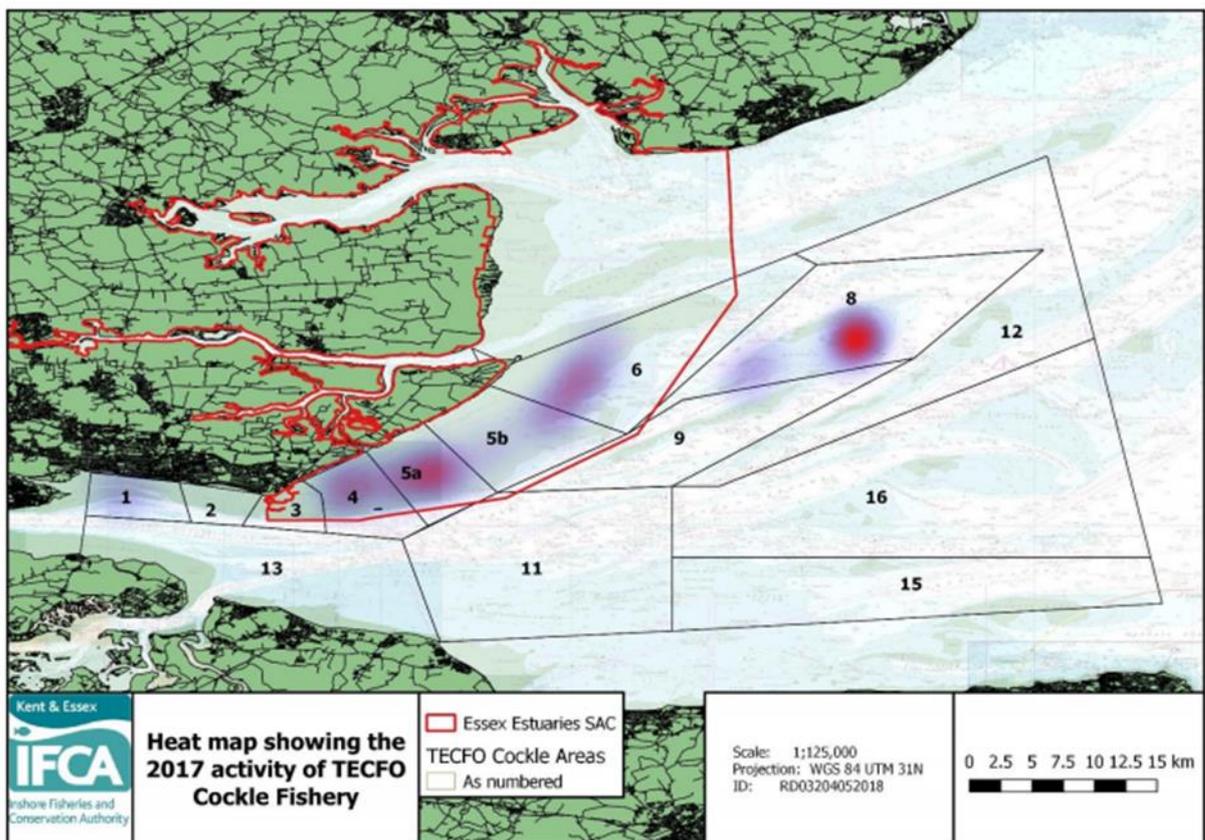
The use of regulatory instruments such as TECFOs are a relatively recent policy development. When the Leigh-on-Sea cockle fishery was first established there was little regulatory governance in place for managing the fishery in a sustainable way (lr.org). However, as the shellfishery developed, it gained a reputation as the most consistent of the UK cockle fisheries in terms of raw cockle landings and cockle meat yield (The Ministry of Agriculture, Fisheries and Food, 1972). Continued modernisation appears to have enhanced this reputation.

Traditionally, the Leigh-on-Sea cockle fishery operated all year round, but in more recent times, under KEIFCA regulation to improve fisheries management, a fisheries order restricts harvesting to an annual fishing season from June to September/October (lr.org). In addition, an early TECFO (1994) already limits the number of licenses permitted to exploit this commercial fishery (lr.org). No

individual is permitted to fish for or harvest cockles using any type of equipment other than a dredge deployed directly from a registered vessel. The Leigh-on-Sea registered cockle dredge vessels are highly specialised and specifically designed for operating in the designated shellfishery zone (lr.org). 7 of these vessels feature in this study; Indiana, Renown, Liberator, Renown VI, Mollusc Lass, Paula Marie, and Sophie Jayne. However, the observational field work focuses primarily on the latter; Sophie Jayne and the small firm which owns the vessel and operates the nearby production facility.

With more stringent regulation or fishing quotas, such as total allowable catch (TAC) mechanisms (ec.europa.eu), fishery orders to control cockle stock created for the Leigh-on-Sea vessels mean a 14-week annual harvesting season is the norm. Furthermore, each licenced vessel is only permitted to dredge for cockle three days a week. However, whilst wild-caught cockle stock varies from year to year, the resulting technological efficiencies and change in practice as a result of regulation appear to have barely impacted commercial catch volumes, which have remained unchanged for the past 20 years (UK sea fisheries statistics, 2018). This would indicate that the cockle fisheries on the whole are being managed in a sustainable manner, a claim endorsed by the Leigh-on-Sea's Marine Stewardship Council (MSC) certification which evaluates the fishery's performance using criteria such as stock management and fisheries productivity (lr.org).

However, even with this increased regulation to control commercial overfishing and perhaps because of how technology has modernised practice, the shellfish sector, despite facing certain challenges, continues to serve a successful market for seafood in the UK: the country's shellfish sector produces 153,000 metric tons

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(MT) of products annually, which in monetary terms is worth circa GBP 260 million, or 25% of the nation's overall catch (seafoodsource.com).

Cockle catch as a sub-segment of this market rarely exceeds 10 percent of annual landings by UK vessels. Nonetheless, this does not diminish the importance of cockle harvesting and production to the UK shellfish industry, nor indeed the monetary value of cockle to regional and national economies. The value of the 2018 cockle catch, estimated at GBP 6.2 million, illustrates this point (UK sea fisheries statistics, 2018).

Taken as a whole, this contextualisation of what is referred to in the thesis as regulatory change and 'modernisation' (Berger, Berger, and Kellner, 1973, p. 15) reveals the key influences surrounding the social phenomena under investigation and establishes the significance of the study. All these aspects of the case as they relate to contemporary practice are reflected in the objectives of the thesis.

1.3 Aims and objectives

The aim of this study is to generate fresh insight about the social interaction and mechanisms of coordination employed by practitioners in occupational communities. The strategic intent is to analyse, from a CoP perspective, the capacity of an established community of independent cockle merchants to withstand a sustained period of modernisation.

To address this aim, the researcher constructs an interpretative understanding of Leigh-on-Sea cockle enterprises responding to the demands of modernisation and change as seen through the eyes of the shellfish merchants themselves. This is achieved by scrutinising the shellfish merchant's role to determine what shellfish merchants know about the practice of cockle harvesting and production. The idea is to document working arrangements and practice. This includes

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consideration of the interdependence of the structural conditions, alongside shellfish merchants' actions and interactions in relation to their resources. Essentially, this is about how their tools, machinery and technology are used to enact practice as an antecedent to collective action and learning which contributes to modernisation.

Three objectives specify the purpose of the research and indicate what the researcher sets out to achieve in this thesis. Each of the three research objectives demanded a slightly different analytical focus.

Objective 1: To investigate the shellfish merchants' lived experience over an extended period of time, that is several annual fishing seasons (2011-2018), to understand their working arrangements and their practice.

For this objective it was necessary to investigate the shellfish merchants' routine occupational practice by focusing on the stages of shellfish harvesting and production. This, in turn, provided an opportunity to identify rules, norms and routines underlying the practice. This objective is met by focusing more specifically on one particular Leigh-on-Sea enterprise and their encounters with other shellfish merchants in close geographic proximity within this specialist shellfishery.

The interpretation of the shellfishery as a geographically bound community, with a strong attachment to Leigh-on-Sea as a locality of practice, provided a start point for evaluating the relevance and social dynamics related to place-based activity that the shellfish merchants had made their own (Wenger, 1998). In this regard, an interpretative paradigm and an ethnographic approach are mutually compatible, as this helped the researcher to comprehend the extant complex social relations, activity, and actions of a place-based conception of a CoP.

It was necessary in this instance to use a specific type of interviewing, which requires the researcher to develop specific ethnographic questions to "then ask themselves these questions" as the incumbent participant observer (Spradley, 2016, p. 122). The answers to these questions then come from observation and field notes. A critical factor in all of this, as with all ethnographic studies of occupational practice, is that the study takes place where the work normally happens (Orr, 1996).

<u>Objective 2</u> To analyse from a CoP perspective the social interaction, knowledge sharing and common ties of interest that characterise the occupation of cockle harvesting and processing.

This objective required the researcher to draw on theoretical arguments about CoP and occupational communities to guide the research process. This involved first conceptualising structural arrangements using both a CoP frame and features of an occupational community, then applying this conceptual combination in an empirical analysis to characterise an underrepresented occupational context of practice.

<u>Objective 3</u> To examine the links between access to resources, practitioner learning and communal capacity for collective action.

Achieving this objective involved building a history of practitioners doing things together to better understand the real events that propelled a geographic cluster of independent yet inter-dependent shellfish merchants towards modernisation.

To achieve this objective the researcher continued to adopt an ethnographic, interpretive approach. However, shifting to a more in-depth investigation to examine the social phenomena of interest, the procedures employed were extended to incorporate visual methods, explicitly photo-elicitation and

rephotography (Tinkler, 2013). For this reason photographs taken by the researcher and other older photographs were introduced to the participants in the course of the field work. Using photo-elicitation and the contrasting of past and present photographs permitted the researcher to examine this objective more explicitly by considering the relationship between past traditions, present practice, and modernisation. This information is used to consider how members a local occupational CoP who share the same physical work situation turn into the type of person their community demands.

Together these objectives represent a research opportunity to marshal a qualitative methodology and selected theoretical concepts from organisational studies to build a conceptual argument about endurance and change in occupational CoP.

1.4 Structure of Thesis

Chapter 1 Introduction

This introductory chapter deals with all the necessary groundwork and motivations for the proposed thesis. The remaining chapters are organised as follows.

Chapter 2 Literature Review

Chapter 2 contextualises the study in the relevant literature. The main theory used in this study is occupational community (for example Van Maanen and Barley, 1984) and CoP (mostly Wenger, 1998). Wenger's (1998) conceptualisation as one way of understanding complex social situations has become highly popular with Management and Organisation scholars interested in practice and organisational learning. In stark contrast, academia has mostly

overlooked the work of Van Maanen and Barley (1984); their research focuses on the relationship between community and organisation. The researcher draws on selected literature from these two domains to develop a conceptual framework for the study.

The chapter consists of two sections. The focus for the first part are the critical elements of CoP as conceived by Wenger (1998). This is not a systematic review of the enormous literature on CoP. It is instead a review of the foundational concept to appreciate the current state of knowledge about the subject and consider the diverse perspectives that have emerged since the seminal works of Brown and Duguid (1991), Lave and Wenger (1991) and Wenger (1998).

The main focus is the conceptual status of CoP and the value of the construct as an analytical framework. Primarily this involves an appraisal of Etienne Wenger's most comprehensive conceptualisation of the defining characteristics of CoP (1998). To clarify, Wenger (1998) built an argument around the social nature of learning communities dependent on a trio of criteria or sub-elements: a shared domain of interest, mutual engagement within the community, and a shared repertoire of resource and practices. These three structural elements establish the basis for CoP theory (Mills, 2011). Hence, it is the features that Wenger (1998) proposed when asserting exactly what might constitute a CoP which are discussed in the literature review to provide an analytical starting point.

Given the empirical focus on an occupationally oriented community, the chapter also considers the notion of an occupational community. To this end, there is a discussion about the terms *occupation* and *occupational community* through reference to the work of Salaman (1974) on occupation and collegiality, and Van

Maanen and Barley's (1984) conceptualisation of an occupational community as an entity which develops organically around shared interests.

The aim of the literature review is to contrast the key enabling features of a community of practice with the key characteristics of occupational community interactions and practice to formulate what might constitute the conceptualisation of an occupational CoP.

Chapter 3 Research Methods

This is a significant chapter which provides a thorough description of the methods used for the empirical study, including substantial examples of primary data and research instruments. This chapter and the succeeding results chapters are written in the first person to reflect the incumbent researcher as an active participant in the research process (Hammersley and Atkinson, 1995).

There is a section on epistemological/ontological matters in relation to the selected methodology, broadly summarised as an inductive approach using interpretative methods, and an explanation of ethnographic research instruments used in the field work undertaken. The methods described in this chapter are primarily participant observation and ethnographic interviews supplemented by photo-elicitation.

Results chapters

The fourth, fifth and sixth chapters present the findings of the research, focusing on each of the three research objectives:

- Chapter 4 Making sense of shellfish practice
- Chapter 5 Explaining phenomena that characterise shellfish harvesting and processing

- Chapter 6 Insights and perspectives on occupational CoP.

Chapter 4 presents the results obtained from the participant observation and ethnographic interviews undertaken during the field work. Observations of work arrangements and practice at eye level are supplemented by topographical data in the form of an aerial view of the research site. On this basis data on the changing typography at the field site are contrasted in two Google Earth images, to describe the development of shellfishery infrastructure during the study period. Then, observational data of the various activities that make up the shellfish merchants' everyday practice are reviewed.

Chapter 5 Results 2

In this chapter the analysis of observational data and ethnographic interviews is taken a stage further. To theorise about the study findings, empirical indicators of participation in practice and practitioner learning in situ are related to conceptual elements of CoP and occupational communities..

Chapter 6 Results 3

This chapter presents an interpretation of informant's accounts of events surrounding the shellfishery's modernisation journey over the past several decades. There is an expanded discussion on the field data, in particular visual data, to verify that whilst the effect of modernisation on practice may well be transformational, the process of modernisation typically involves many intermediate steps.

Chapter 7 Conclusion

To emphasise its strategic impact as a study of substantial duration which examines associations between occupational CoP and modernisation, the

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concluding chapter provides a synopsis of what the thesis covered. It begins by restating the research aim and objectives which directed the study.

Chapter 2 Literature review

2.1 Introduction

This chapter contextualises the foundational concepts relevant to the thesis. The main literature used in this study is CoP, mostly Wenger's (1998) perspective, and occupational communities, as for example the studies by Salaman (1974), and the work of Van Maanen and Barley (1982). Whilst Wenger's CoP has become highly popular within Management and Organisational studies, the concept of occupational communities has been relatively less influential in practice-oriented research. Whereas much is already known about CoP as an approach for conceptualising and understanding the world of work (Storberg-Walker, 2008), more scholarly time and effort has gone into researching communities within and between different types of organisations than the direct study of occupations (Anteby et al., 2016).

Perhaps surprisingly, this seems to have been the case for some considerable time. In a like manner, Trice (1993) argued that the study of culture and behaviour in organisational studies was almost solely on organisations rather than occupations. Meanwhile, Trice and Beyer (1993), who were equally concerned by the dearth of occupational research, were troubled by the lack of opportunity this presents to understand practitioner behaviour and occupational subcultures. Overall, studies which contextualise practice outside traditional organisation settings remain rare (Nicolini, Pyrko, Omidvar and Spannellis, 2022). The research undertaken as part of this thesis will thus contribute modestly to redressing this balance.

There are two main parts to the chapter. The initial focus is on key influential theorists, the evolution of CoP (portrayed as three formative phases) along with

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the related concepts of situated learning and Legitimate Peripheral Participation in Lave and Wenger's (1991) original formulation of CoP. Next, the analytical components as denoted by Wenger's (1998) reconceptulisation of Lave and Wenger's (1991) initial perspective on learning as social participation in practice is explained. Giving prominence to these aspects and summarising the literature on how CoP is used to study work and workers will serve to investigate occupational communities in more depth.

The discussion in the second part of the chapter centres on the term *occupational community* where it overlaps with CoP forms. Contrasting Wenger's (1998) CoP perspective with Salaman's (1974) assumptions on occupational communities provides a fruitful dialogue for the purpose of conceptualising a community "focused on their work, not the organisation" (Orr, 1996, p 76). A theoretical discussion with this intent in mind will manifest a conceptualisation of an occupational CoP, creating in essence, a conceptual framework which can then be deployed in a situation which forms the basis for an alternative context to an organisation: namely, a community of practitioners (Orr, 1996) oriented appreciably to their occupation (Salaman, 1974). To this end, a tabulation contrasting specific conceptual overlaps of CoP and occupational communities concludes the chapter.

2.2 Introducing the tradition of CoP

As indicated at the outset, the literature review begins by synthesising a branch of practice-based theory relevant to the study of organisations, namely CoP (Nicolini, 2012). This is not a systematic review of the enormous literature on CoP. It is instead a review of the foundational ideas to appreciate the current state of knowledge about the subject and consider the diverse perspectives that

have emerged since the seminal works of Brown and Duguid (1991), Lave and Wenger (1991) and Wenger (1998). Only by considering the theoretical start point of the tradition is it possible to fully appreciate the utility of CoP as an applied theory.

The first step is to bring to the fore different theoretical conceptualisations originating from different phases of the evolution of CoP theory. Logically this includes certain foundational and seminal works. Cox (2005) considers four works on CoP seminal; a paper by Brown and Duguid (1991) and three books by Lave and Wenger (1991); Wenger, (1998) and Wenger, McDermott and Snyder, (2002). For this review, in chronological order below, it is these same four works which are considered theoretically important to this thesis:

- *Situated Learning: Legitimate peripheral participation* (Lave and Wenger, 1991).

- *Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation:* (Brown and Duguid, 1991).

- *Communities of Practice: Learning, Meaning and Identity* (Wenger, 1998).

- *Cultivating Communities of Practice: A guide to managing knowledge* (Wenger et al., 2002).

This review acknowledges the above seminal works, but draws on a range of other secondary CoP sources too. Amongst these authors who were the first to explore CoP it is important to note a few disparities. For example, Cox (2005) observes that the first three works are mostly bound together by their constructivist epistemology. Essentially, Wenger et al.'s (2002) more prescriptive system of CoP management for organisational practitioners is a different idea entirely (Cox, 2005). Furthermore, whilst each of these scholars makes the

important point that work and learning are intrinsically linked, only one of these seminal pieces acknowledges how work and learning can be complemented by innovation. Notably, Brown and Duguid (1991, p. 51) make explicit how innovation is an essential factor in enabling practitioners to challenge existing structures (Peters, 2019). These authors appear nonetheless to embrace a similar assertion that CoP provide a communal context for practitioners to engage in work practices, learning, and creating new possibilities for themselves, their community and their organisations (Brown and Duguid, 1991; Lave and Wenger, 1991 and Wenger, 1998).

Notwithstanding which scholar was most vocal about a particular contention, or the plurality of CoP debates along the scholarly path etched out by these authors, this seminal assembly of thinkers also converge around the notion of what CoP offers to practitioners. Overall, Brown and Duguid (1991); Lave and Wenger (1991) and Wenger (1998), despite their contrasting perspectives, concur that communities of practice:

- share a need to learn about something collectively without the need for a lot of explanation,
- provide practitioners with some appreciation of the challenge they are facing and why it is important to solve a particular problem,
- offer a timesaving approach to practitioners who need to learn about their practice,
- are motivated by working out innovative ways to practise what workers do together to accomplish a given task or operation.

With regard to the amassed CoP literature, the most influential publications which established CoP as a tradition are, for the purpose of this thesis, depicted as

three definitive phases: namely, invention, innovation and adaptation (Figure 2.1). The first two phases (invention and innovation) are briefly reviewed next, and then finally there is a somewhat extended discussion about the transitional literature from the adaptation phase.

The first phase belongs to Lave and Wenger (1991), who originally proposed the idea of CoP as a conception which offered a new model of learning in the workplace, and Brown and Duguid's (1991) seminal work (drawing on Lave and Wenger's (1991) study) which focuses on informal groups of people, viewing CoP as a source of innovative solutions to organisational problems (Cox, 2005).

The second phase, a period of conceptual innovation, saw the CoP protagonists led by: Wenger (1998); Brown and Duguid (1991,1996, 1998); Brown and Grey (1995); and Stucky and Brown (1996) propagate CoP as a theoretical domain. As Murillo (2011) observes, it was especially Wenger (1998) and Brown and Duguid (1991;1996;1998), with their alignment to organisational studies and knowledge management respectively, who stimulated intense scholarly interest in CoP, as publications in the practitioner and academic literature soared and peaked before falling back after 2005. Certain reinterpretations which emerged during this *gold-rush* phase caused a series of conflicting discussions (Murillo, 2011), several of which are reviewed later.

The third, and transitional phase, comprises mostly a continued critique of the original CoP concept with a stream of different designations and deviations versus original propositions. It was at this time of reinterpretation (Murillo, 2011) that Wenger et. al. (2002) attempted to angle CoP research in the direction of managers and consultants. Wenger and his collaborators argue that the CoP framework can be purposefully used as a managerial intervention tool to facilitate

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the development of CoP within organisations (Wenger, et al., 2002; Cox, 2005). This conceptual reformulation relatively quickly gained traction amongst the knowledge management community. However, renewing the framework to cultivate knowledge or knowing in practice as a commodity to be managed divided scholarly opinion. Purposely nurturing CoP to produce such an outcome was seen by some as a departure from Lave and Wenger's (1991) original social learning perspective underpinning CoP (Gherardi, S., & Miele, 2018).

Overall, the reinterpretations and alternative conceptualisations which emerged hardly constitute a separate branch of CoP theory. Nonetheless, this transitional literature, the aggregate effect of these re-workings, usefully illustrates the contrasting interpretations that continue to be levelled at CoP. How this transitional literature links the foundational ideas of CoP with present-day thinking is discussed next.

Figure 2.1 The evolution of CoP. Source: Author

Phases of the tradition of CoP	Seminal works
Invention phase	Lave and Wenger (1991) conceive the idea of a CoP
Conceptual innovation	Brown and Duguid (1991), but particularly Wenger (1998) expand upon the original treatise and develop CoP as an analytical framework
Adaption (transitional literature)	Wenger et al., (2002) reconfigure selected concepts and reposition CoP as a knowledge management toolkit for managers and consultants. Several differing reinterpretations expressed by CoP scholars.

One of the problems with the transitional literature is that what has become the centre ground in the evolution of CoP seems to focus on ideas which are not too distant from some of Wenger's (1998) foundational treatments of multiple CoP and interconnected practices. Two phrases employed as valuable complements to the broader conceptualisation of CoP are discussed here to illustrate this point more specifically.

In considering CoP between and across organisations, Wenger (1998) observes that some communities may form *constellations* within their own organisation based just as much on local connections as on practice. These "constellations of practices", claims Wenger (1998, p. 127), comprise multiple CoPs interacting at the periphery of or beyond their boundary. Such constellations can be found in organisations when people in one CoP associate with members from another CoP in a related way, perhaps because of proximity, similar conditions, or the need to share resources etc., (Wenger, 1998).

In the transitional literature Ward (2000), viewing communities within organisations as a naturally emerging phenomenon, reintroduces constellations of practice to study organisational relationships. The notion of constellations of interrelated practice is subsequently expanded upon empirically by Gherardi and Nicolini (2002) and theoretically by Wenger-Trayner, E., and Wenger-Trayner, B. (2014).

A second foundational idea which shifts the focus of the CoP approach also remerges during this period in the form of a reiteration of Wenger's (1998) *landscape of practice*. This is a broader contextualisation of CoP. In contrast to constellations of practice, Wenger (1998) deploys the landscape of practice model to explain the interaction between a CoP and the external environment.

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This accumulated view i.e., the relationship between local situated practice and the development of organisational learning between CoPs or networks of practice (NoPs) suggest Pyrko, Dorfler and Eden (2019), offers a multilevel perspective of practices.

Another multilevel conceptualisation of CoP is *collectivity of practice*. Suggesting that CoP ill-fittingly represents temporary groups in project-oriented work, Lindkvist (2005) proposes collectivity of practice, expressed as equivalent to a knowledge community. The functional focus of project groups, argues Lindkvist (2005), is knowledge activation and exchange, rather than participation in practice and social relationships. In situations where knowledge is distributed and there is insufficient space for practice-based learning asserts Lindkvist (2005), it can be beneficial to consider the notion of organisations as a collectivity of practice to explore more transient forms of CoP.

These temporary or loosely-coupled social formations, generally characterised by multiple CoP configurations, are closely related to the idea of networks of practice (Wasko et al., 2004; Wasko and Faraj, 2005). However, this is nothing new and equates to Brown and Duguid's (1991, p. 53) earlier contention that individuals may participate in loose networks, or using their term, a "community of communities". One question that needs to be asked, however, is whether these scholars' offerings are true reconceptualisations that extend the literature, or whether these are simply nuanced designations. If the latter, then it could be contested that CoP scholarship, in what has been termed here the transitional literature, has stagnated with little to be considered genuinely new in these different conceptual classifications. What is more, with few exceptions, management and organisation scholars have not engaged with this stream of

nuanced conceptions introduced over the years to denote phenomena related to CoP (Nicolini et al., 2022).

To conclude the description of the evolution of CoP as field of study, it further improves the currency of the literature reviewed to acknowledge the work of Nicolini and collaborators who call for a wider debate. Nicolini et al., (2022) look set to return CoP scholars to their roots by triggering a resurgence of interest in occupational communities. Who knows, perhaps CoP in evolutionary terms is about to enter a fourth phase. In any case, this is an area where this study can make an original contribution.

2.3 The concept of situated learning

In this section we return to Lave and Wenger's (1991) theoretical perspective that learning takes place in the same context as activity. Understanding the specific concept of situated learning embedded within CoP (Lave and Wenger 1991) permits the researcher to consider learning situated in organisations versus learning situated in occupational contexts.

Lave and Wenger assert that CoP is a "system of relationships between people, activities, and the world" (1991, p. 98). When Lave and Wenger (1991) first introduced the idea of CoP as part of a social and situated theory of learning, they envisaged that practitioners participating through routine activity could, over time, become masters in their practice. Wenger (1998) clarifies his provision of a CoP as a complex social system for cultivating members' learning. Their contextual conceptualisation of learning as a constituent part of CoP is predicated on the employment of learning processes that are both informal and formal (Lave and Wegner, 1991; Koliba and Gajda, 2009). Intrinsically, situated learning represents

the notion of workers learning in situ, both from one another and from doing what needs to be done to accomplish a task (or activity).

Situated leaning is the very cornerstone of Lave and Wenger's (1991) conceptual framework. Situated learning emphasises the underlying forces of social and cultural power within communities: that is, the dynamic between practitioner participation and the development of an individual and their identity (Handley, Sturdy, Fincham and Clark, 2006). Leaning in situ, through participation in practice invariably involves social interaction (Roberts, 2006).

Chaiklin and Lave (1996) unpacking this principle explain that in addition to workplace learning, practice, activity and action also happen in situated ways. This explanation of situatedness is synonymous with the idea of learning embedded in the workplace (Chaiklin and Lave, 1996, p. 17). The premise is that contexts for work and learning are constructed as people organise themselves to undertake routine activity (Lave and Wenger, 1991) and thus give meaning to what they do in everyday practice.

When a theorisation of on-going engagement in practice and social interaction was first proposed by Lave and Wenger (1991) as situatedness, it proved conceptually problematic for scholars. To clarify the confusion, an aggregated theorisation called Legitimate Peripheral Participation (LPP) was developed. LPP offers a very different concept of learning (Fuller, 2013).

In short, LPP as posited by Lave and Wenger (1991) provides an opportunity to talk about the relations between and identity of newcomers and old timers. As a form of identity building (Patel, 2018), learning in situ, or in Lave and Wegner's terms, LPP, (1991) facilitates transformation from novice to master. It is this focus on newcomers and the transformation of their identity over time which underpins

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CoP as a process of collective learning (Wenger-Trayner and Wenger-Trayner, 2015).

As a more encompassing articulation of situated learning, Lave and Wenger's (1991) LPP concept provided the means to capture a community members' development and change in identity from newcomer or novice to expert. The argument that practitioners could build personal legitimacy as they transitioned from participating in periphery practice to become experienced community members or practice gurus, and eventually old timers, became established as a fundamental composite of CoP thinking (Lave and Wenger, 1991).

Before moving on, there is a crucial point to make about LPP in relation to this study and how the perspective was first introduced to redeem ideas about apprenticeship learning in technical and occupational settings (Lave and Wenger, 1991). It should be noted that because Wenger's (1998) CoP and the concept of LPP are intended to target work and learning housed within an organisation, practitioners and their practice cannot be considered as part of "a broader occupational community" (Murillo, 2011). This would seem to confirm that although CoP and occupational communities are similar concepts, they are not the same thing.

Returning (briefly) to LPP, the conjecture is that LPP is not necessarily predicated on an arrangement whereby an incumbent would develop by moving on up through an organisation hierarchy or be afforded promotion or some managerial position. There is the opportunity, instead, however for a practitioner to influence practice and add value to the community by the developing a repertoire of expertise in a particular occupation. This implies that the efficacy, productivity and ultimately sustainability of a CoP as a space for learning and innovating could

be galvanised most by the respective occupation which serves as the shared interest for community membership. In contrast, any organisation within which the CoP operates (and is thus managed and controlled) provides an environment which could impair the capacity of a CoP to effectively integrate work and collective learning. For instance, highlighting the connection between geographical proximate work situations and occupational communities, Salaman (1974) suggests that organisational conditions can make it difficult to initiate cooperative working outside the boundaries of the organisation. The inference is, therefore, that an occupational nexus as much as an association to a home department or organisation matters when discussing CoP. This is a topic that the researcher will return to later in the thesis.

2.4 Etienne Wenger (1998) on Communities of Practice

Etienne Wenger's (1998) comprehensive and innovative conceptualisation helps to establish the defining characteristics of CoP as an applied theory. Wenger's (1998) complex reconceptulisation of the original perspective developed by Lave and Wenger (1991) elevated the value of the construct as an analytical framework and thereby established CoP conceptual status. To clarify, Wenger (1998) built an argument around the social nature of learning communities dependent on a trio of criteria or sub-elements: a shared domain of interest, mutual engagement within the community and a shared repertoire of resource and practices. These three structural elements, which provide the focus for *meaningful* engagement in practice (Wenger, 1998), establish the basis of CoP theory (Mills, 2011). The three elements are underpinned by a quartet of what Wenger (1998, p. 5) regards as "deeply interconnected" leaning components: namely meaning, practice, community and identity. Wenger's (1998) conceptual components, and the

functional relationship between these elements characterise CoP as a social learning frame for knowing and learning.

These better-known features (Smith, Hayes and Shea, 2017) which are very much the cornerstone of the analytical utility of CoP are described next:

- Meaning – a way of negotiating meaning by viewing life and the world as a learning system

- Practice - members develop common frames of reference for sharing a repertoire of resources, experiences and viewpoints that can sustain engagement in action and facilitate the development of a mutual sense of identity

- Community – a way for members to interact, discuss, share, exchange and mutually learn recognisable competences

- Identity – an inclusive sense of belonging as a means for practitioners to learn and develop in the context of community membership (Wegner, 1998; Hara and Schwen, 2006).

To consider how Wenger (1998) associates practice and community as a way to bring coherence to the term CoP we need to consider the analytical schema, or framework, comprising three analytical dimensions. Whilst what is proffered by Wenger (1998) to be a community of practice helps to operationalise the analytical framework, this is not strictly a definition (the author prefers to speak about what a CoP is not). The extent to which this definitional deficiency has diluted the meaning of CoP and become an ongoing problem in the development of the field is a matter to be discussed later in the chapter.

Nevertheless, by meticulously describing what joint enterprise, mutual engagement and shared repertoire are in relation to CoP Wenger does take us

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closer to the analytical functionality of the analytical construct. The author describes each characteristic of practice 'as a source of coherence of a community' (Wenger, 1998, p. 73-82) asserting that the aforementioned dimensions which comprise the schema foster social cohesion, and nurture participants' sustained practice in their community. Combined, the aspects of shared repertoire, negotiated meaning and the mutual engagement of community participants in practice 'provide a privileged context' for the negotiation of meaning within CoP (Wenger, 1998, p. 83). These three analytical dimensions are examined in more detail next.

Mutual engagement concerns how people do whatever it is they do as practitioners. As membership of CoP involves working together, actors will routinely interact and establish norms, expectations and relationships (Smith et al., 2017, p. 212). Furthermore, because members of CoP are bound together by their practice, social interaction and learning, community membership becomes a matter of mutual engagement (Wenger, 1998). This mutual engagement, as Koliba and Gajda (2009) confirm, depends on and influences the characteristics of the community, including member relationships and the nature of any interchange in interaction in relation to establish cultural factors, such as trust, belonging and reciprocity, etc. This, Wenger (1998) argues, is what characterises the community in CoP. In this way, CoP becomes the main context in which actors and collectives can appropriate work and make sense of what they do through sustained mutual engagement (Wenger, 1998; Cox, 2005).

Joint enterprise is the outcome of a collective process of people all working towards the same common cause (Wenger, 1998). In CoP, participants understand and renegotiate their own response to their given situation. These responses are interconnected in as much as community members share a

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common, collective objective in coordinating and developing practices that reflect the full communal interest of the CoP. However, as Wenger explains, "[t]he enterprise is joint not in that everybody believes the same thing or agrees with everything, but in that it is communally negotiated" (1998, p. 79). Participants in CoP must, therefore, continually renegotiate the complexities associated with their milieu. Their imperative as individuals and as a community is to find a way to work together. For example, community participants would need to decide organisational arrangements and reconcile disagreements collectively to develop relations of mutual accountability (Wenger, 1998).

A community's regime of mutual accountability thus defines precisely what CoP must pay attention to and do well. In this respect, a regime of mutual accountability is of fundamental importance to a community's collective toil, practice and mutual engagement Wenger (1998). Consequently, the CoP response and any action in response to demands made on the community or an individual are coordinated. This reflects the accountability and complexity, which reside in a mutually engaged community of practitioners and is, thus, a strong representation of their respective and joint aspirations (Wenger 1998).

Shared repertoire, claims Wenger (1998), constitutes a major source of coherence in pursuit of CoP objectives. Shared repertoire can be thought of as the inventory of communal resources (stories, artifacts, historical events, routines, sensibilities, discourses, styles, tools, etc.) that a community, progressively develops over time (Wenger, 1998; Storberg-Walker, 2008; Smith et al., 2017). The use of the word "repertoire" in this context specifically emphasises the "rehearsed character and … availability" of the shared resource available for community engagement in practice (Wenger, 1998, p. 83). This shared repertoire becomes part of a community's practice and provides a means

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of "talking about the shared historical and social resources, frameworks and perspectives that can sustain mutual engagement in action" (Wenger, 1998, p. 5). Shared repertoire, then, like learning and participation, is how a CoP can cultivate and exercise agency (Koliba and Gajda, 2009). In other words, as a key resource in the negotiation of meaning, shared repertoire facilities sustained engagement in practice (Wenger, 1998).

Comprehending the three analytical dimensions together in this way highlights the importance of coherence in relation to the CoP concept. Viewing it as an analytical schema or framework stresses the importance of an across-the-board understanding involving the whole person "subsumed within processes of learning and one in which learning is taken to be an integral aspect of practice" (Lave and Wenger, 1991, p. 35). Moreover, the CoP framework put forward by Wenger (1998) should be viewed less as a procedure or model for engaging in social practice that entails learning shackled to practice, but rather as an approach designed to reveal an analytical perspective of enabled practitioner learning taking place (Hughes, 2013; Lave and Wegner, 1991, p. 39). Grasping such learning, it is argued, demands coherence between the aforesaid dimensions and socialisation amongst those participating and collaborating in practice (Lave and Wenger, 1996).

This demonstrates that a shared perspective (Birdwell-Mitchell, 2016) and collective action affect individual learning. In this respect the learning, routinely shared and collective (Fenwick, 2008), is seeded in mutual engagement in practice, social interaction and joint endeavour (Wenger, 1998). More importantly, this idea of peer learning (particularly Chaiklin and Lave, 1996; Wenger, 1998; Wenger et al., 2002; Birdwell-Mitchell, 2016) might offer an alternative deliberation about what constrains or enables actors to exercise
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agency as a collective. As such, providing an interpretation of these three components and the analytical schema developed from them is considered particularly pertinent for practice-oriented studies. This assertion is made on the basis that Wenger's (1998) schema or framework has potential analytical utility here. Moreover, it could provide an analytical springboard to garner insights about the situated nature of participation and learning through practice (Storberg-Walker, 2008) in the unique empirical context proposed for this study. Finally, yet importantly, the anticipation is that CoP as the unit of analysis fused with an occupational perspective can offer a distinct alternative view of the capacity of an established community of practitioners to withstand a sustained period of modernisation.

Incidentally, one common conceptual feature which usefully expresses the relationship between an individual practitioner's involvement with CoP is *activity* (Lave and Wenger, 1991; Chaiklin and Lave, 1996; Nicolini, 2012); "there is no activity that is not situated" (Lave and Wenger, 1991, p. 33) and "situated activity always involves changes in knowledge and action" (Chaiklin and Lave, 1996 p. 5). Thus, consequently learning, which is integral to practice, is socially produced (Lave and Wenger, 1991, p. 35). Correspondingly, where *perspectives on activity and practice*, which is the sub-text of Chaiklin and Lave's (1996) book, offer a conceptual take on contextual activity and this intersects with theoretical perspectives on occupational practice, then this aspect too could be considered pertinent to the study.

2.5 Why CoP?

Although, as mentioned earlier, Wenger's CoP framework has afforded scholarly direction (Smith et al., 2017), this conceptualisation has been subjected to

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considerable criticism (Amin and Roberts, 2008; Cox, 2005; Hodkinson and Hodkinson, 2004; Fenwick, 2008; Fox, 2000; and Nicolini, 2012, for example). Therefore, before moving on, it is important to address the question of why specifically CoP should be conceptually appropriate to the research undertaken for this thesis.

A key benefit of the CoP framework is that it is underpinned by the belief that practices are socially foundational, which is eminently suitable in work contexts characterised by collective human action. However, aside from the definitional issues highlighted earlier, there are other limitations too. Management and Organisational scholars have observed, for example, that there is a tendency in their tradition to focus on human activity and dismiss objects, things and artifactual complexities (Fenwick, 2010). In this respect, CoP, with its social constructionist roots, could be regarded as imperfect for analysing the increasing technical nature of contemporary work (Barley, 1996). After all, as Nicolini (2012) reminds us, practice, effort and endeavour are expended as much through technology as by human activity. Wenger (1998) would contest this point, claiming that the dimension of shared repertoire was developed with the conceptual utility to deal with modern technology and, for example, occupational tools. Clearly though, CoP is not weighted in favour of the technical, modern domain where occupational objects and artifacts tend to be found (Barley, 1996).

In any event, to confine conceptualisations of participation in CoP to humans is not satisfactory in contemporary organisational research (Fenwick, 2010). Indeed, scholarly endeavours that persist with a strictly human-centric ontology offer no account of objects and artifacts and fail to countenance the social presence of modernisation in the workplace (Orr, 1996). CoP's predominant human factor conceptualisation can, therefore, be a limiting factor given the

technical nature of contemporary work, such as occupational practice. Hence, the need for some forethought about how this inadequacy might impair the conceptual framework design for this study.

Notwithstanding the practical challenges of using CoP in empirical work, applying Wenger's (1998) three constitutive dimensions as already indicated (shared repertoire, negotiated meaning and mutual engagement) does appear to offer a coherent and feasible way to achieve the aim of this thesis to yield insights about the social interaction and mechanisms of coordination employed by practitioners engaged in modernisation. This is because, notably, the utility of the tool is well-suited for foregrounding activity, action, interaction and, most importantly, learning. In this way, the emphasis is on activity, with the person rehabilitated to practitioner, forming social linkages to members of a community and thereby offering a relational view of participation and learning as part of occupational practice (Wenger, 1998).

The individual practitioner from this perspective no longer occupies centre stage, as attention switches to collective participation in order to theorise about the exercising of agency. In other words, CoP rather than the individual becomes the prime analytical unit. However, it is in this regard that the thesis argues for the adoption of a theoretical view which emphasises the multiple relationships which occur within occupational situations (Lave and Wenger, 1991) to improve the prospect of developing an alternative conceptualisation characteristic of CoP 'that transcends specific organisational settings' (Orr, 1996 p. 151). That is, a theoretical formulation of social relationships and interdependent learning in CoP contexts without the usual organisational-occupational tension which can inflict CoP inside organisations. In other words, an occupation as the context rather

than an organisation or, to expressly paraphrase Wenger (1998), a landscape of occupational practice.

2.6 Occupational work and occupational communities

This section further explains the reasoning behind the focus on occupational work, of which the key point to mention is the opportunity to join a conversation at the intersection of two adjacent topics: CoP and occupational communities.

Understating the occupational context in relation to CoP is restrictive because, as Brown and Duguid (1991, p. 201) observe, referring only to an organisational frame does not reflect the work-life reality of the practitioner who is ''likely to have more in common with... [occupational peers] … in other organisations than with many of the other employees in their own'' organisation.

As stated already, Management and Organisational scholars seem quite attached to Wenger's (1998) CoP concept, despite an array of differing interpretations. Although, some scholars, as this review has shown, take a different view about how to link CoP theory to empirical work, there are clearly advantages to keeping things simple and ensuring the functionality of the analytical framework is suitable for the job and not overly complex. This can be critically important in relation to CoP, given the challenges faced by researchers when applying Wenger's CoP framework in empirical studies (Murillo, 2011). Thus, in addition to selecting to only use Wenger's (1998) three constitutive dimensions for the empirical work, this study will heed additional advice. More specifically, the researcher will take the cue from Brown and Duguid (1991) and the suggestion from Cox (2005) to use the term the most compatible with the research context.

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In this regard, David Orr is an exemplar researcher regarding the use of Van Maanen and Barley's (1984) occupational lens. Orr completed his now famous ethnographic study of service technicians, unaware at the time of the CoP concept. Orr's work demonstrates, in Salaman's (1974) terms the importance of not being bound to a particular classificatory term. Following a similar path, fusing together occupational communities and constituent concepts of CoP more overtly could provide an alternative perspective on community-type structures beyond the organisation.

In addition to Orr, there are other organisational studies scholars who have taken this approach. The key contributors are Van Maanen and Barley (1982), who draw on Salaman's sociological framing of occupational communities. However, Van Maanen and Barley (1982) should not be discussed without some appreciation of Salaman's (1974) sociologic portrayal of occupational communities. For this reason, Salaman's interest in occupational communities is outlined next.

Taking inspiration from Hughes (1958), Salaman (1974) focussed on similarities rather than differences when reviewing previous studies of four different occupational communities. Data sets from studies of the police, shipbuilders, fishermen and jazz musicians were used by Salaman to examine the phenomenon of occupational communities. As a result of scrutinising the literature on occupations and work, Salaman (1974) was able to deduce the determining factors of occupational communities. His (1974) study characterised these occupational communities against three conceptual themes explicitly: occupational identity, a community reference group (as listener and responder) and the convergence of work and leisure.

Salaman (1974, pp. 21-27) outlines each of these components to offer a definition as follows:

- occupational identity – ''occupational communities see themselves in terms of their occupation role'' (less likely in occupations which do not have occupational communities)

- community reference group - an occupational community reflects a members' ''reference group'' which serves to internalise a common identity which identifies the nature of the occupational work

- •convergence of work and non-work activity – a preferential friendship group comprising occupational colleagues ''rather than friends who are outsiders''.

Salaman (1974) also identified two types of occupational communities: *local* and *cosmopolitan*. In the context of this study, his assertion that a local occupational community, oriented towards the immediacy of local concerns and conditions, is particularly pertinent here. Interestingly, certain features of the Leigh-on-Sea case study in this thesis, like Salaman's occupational community cases, similarly comprise members who share the same work situation, albeit with different employers.

Salaman suggests that occupational communities of a local type comprise members who first and foremost are ''work-mates'', know one another and work together in close geographical proximity (1971, p. 391). Geographic proximity is clearly an important factor to consider when analysing CoP. Tonnies (1955), who also speaks about the importance of this local type of community, emphasises how shared identity and shared context is most intense at the local community

level. What is more, as Brown and Duguid (1991) suggest, local dynamics can be a rich source of knowledge in CoP.

Salaman (1974, p. 37) hypothesised about the relationship between these factors to determine that involvement in "work skills and tasks" is a primary causal factor in the development of occupational communities. The conjecture is that when the level of practitioner involvement in work is high and individual members are positively and strongly engaged in occupational practice, this can foster a high level of commitment in a workgroup.

In relation to occupational work, an occupational community can be regarded as a representation of an individual's pursuit of work in association with a particular collective endeavour (Hughes, 1958). In research on occupational work, it has been acknowledged by scholars for some time that the nature of occupational work endeavours can blur the boundary between work and leisure. For instance, early accounts of occupational communities, such as printers (Lipset et al., 1956) show how a member's work time is inseparable from their leisure (non-work) time (Hughes, 1958) and work-life seeps into life away from work (Salaman, 1974). When work activity and work association intrude an occupational community member's leisure time, this encroachment is referred to as *shoptalk* (Mills, 1956). Work associations of this nature also feature in Donovan's classic studies of women's occupations. In one of these studies *The Woman Who Waits*, Donovan's (1920) inquiry into the occupation of waitressing reveals how distinctive groups of workers who spend so much time together can develop a collective sense of identity and traits, complete with their own "language and …... social attitudes peculiar to themselves" (Hughes, 1958, p. 37).

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Some of these ideas about belonging to a work-group of people broader than an organisational CoP resurface in other writers' work on occupational communities. For example, Trice (1993) reasons in a way that coheres with Salaman (1974) that workers who, because they share the same profession and work experience, also share the same subculture of beliefs and cultural norms. Needless to say, the idea of occupational practitioners conjoining work-related and non-work-related activity in social situations away from the immediate vicinity of, for example, a factory or an office, influence the work of Van Maanen & Barley (1984).

An occupational community according to Van Maanen and Barley (1982) is a group who see themselves as practitioners involved in the same sort of work, untroubled by organisational boundaries or structural constraints. Both Salaman (1974) and Van Maanen and Barley (1982) believe occupational communities are emotionally invested in their work, involved in, for example, looking after the wellbeing of the community and mitigating community risks. Indeed, when work is satisfying and meaningful, this can stimulate elevated levels of worker involvement. For example, Salaman (1974, p. 44) notes how physically demanding work, such as shipbuilding and fishing, are characterised by "involvement-arousing experiences".

Ten years after Salaman's (1974) conceptualisation, Van Maanen and Barley (1984) attempted to consolidate previous work on occupational communities to provide a more integrated framework. The framework produced by Van Maanen and Barley (1984) is clearly influenced mostly by the work of Salaman (1974), whereby the concepts of identity and reference group are similarly aligned. These two frameworks are clearly comparable in as much as both regard the blurring of work and leisure as an influential factor in their respective frameworks. However,

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Van Maanen and Barley (1984) propose a fourth conceptual component to highlight the covert nature of occupational practice sheltered behind internal work boundaries. As discussed earlier, Salaman (1974) chose to categorise an occupational community as either cosmopolitan or local. This is different to Van Maanen, who separated occupational communities by speaking, for example, about traditional and non-traditional types of commercial fishing occupations (Miller and Van Maanen, 1982).

Comparatively speaking, fishing, and in the specific instance of this thesis, shellfish harvesting and production, resembles craft work and like engineering, the technical nature of fishing (shellfish harvesting and production) practice challenges the tradition of the vertically built organisation (Whalley and Barley, 1997). The occupational setting for the thesis research is, therefore, an especially important contextual factor, because it has the potential to illuminate practice less hindered by the type of regulatory prerogatives and thus tension that comes with the organisational embrace (Salaman, 1974).

For instance, in contrast to rigidly defined organisational work structures, an occupational perspective reflects a reality of work less likely to be specified through any organisational job specification or described in standard operating procedures, or documented in work instructions (Van Maanen and Barley, 1982). In conjunction with this, in a less hierarchical ordering of practitioners engaged in the same type of work, there are fewer opportunities to control community members (Van Maanen and Barley, 1982; Van Maanen, 2010).

According to Barley and Orr (1997), empirical intentions of this nature, that is to study occupational settings where practitioners are engaged in technical modes of work, tend to reflect environments where organised employment is less

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vertically structured. Such settings are uncharacteristic of the work arrangements found within the realm of modern organisations and bureaucracies (Nelsen, 1997). The researcher expects to find that the shellfish merchants in this study embrace their everyday reality in ways which differ from the more conditioned arrangements that embody modern organisational governance.

Moreover, an occupational orientation is helpful in interpretive studies of this nature because it gives prominence to the meaning of work for those who undertake it: a perspective which coheres with Wenger's (1998) assertion that the aim of CoP is to create *meaningfulness* to enable learning and develop knowledge. Furthermore, contextual knowledge, as Whalley and Barley (1997) affirm when citing previous studies of technical work, (Orr, 1996 for example), is a familiar thread in occupational studies.

All these theoretical aspects as they relate to the thesis are reflected in the research objectives of the study. As a final point, given the inductive nature of this research, the next section of this chapter offers a selection of prior research which explores elements of the phenomenon under investigation and considers theoretical perspectives that emerge from this empirical work.

2.7 Previous empirical studies on occupational communities in commercial fishing

To further stress the relationship between social interaction, participation in practice and learning, it is helpful to draw on prior research on commercial fishing comparable in context to that of this thesis. Therefore, selected empirical studies of commercial fishing which share an interest in occupational work, change and modernisation are discussed next.

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A typical example is the study cited already led by Van Maanen contrasting traditional and modern forms in a commercial Alaskan fishery (Van Maanen, Miller and Johnson, 1980). A useful characterisation of these two forms of fishing using a range of social and structural factors can be found amongst the empirical results of an Alaskan fishery study by Van Maanen et al. (1980). Just as important are the following studies of commercial fishing communities. Specifically, Miller and Van Maanen's (1979) study of the relationship between occupational communities and regulative fishing policy and, Miller and Pollnac's (1978) more detailed ethnographic study of various fishing communities in Gloucestershire, Massachusetts. Not last in importance is a study by Miller and Van Maanen (1982) about fishing practice from the fishermen's point of view. Using a variant of Spradley's (1980) cultural scene, Miller and Van Maanen (1982, p. 29) returned to the data collected from the Gloucestershire communities and developed the concept of an "occupational scene" to analyse the cultural situation involving traditional fishermen and non-traditional types, such as seasonal and part-time. Designating the latter types, disruptors of traditional practice and focusing on in situ activity Miller and Van Maanen (1982) characterise an occupational scene by drawing on Goffman's (1959) concept of social identity.

First, the pair maintain that when researchers study an occupational scene, they can expect to find newbie practitioners, attracted by potential opportunities to develop, (personally and professionally) into whatever role the occupational scene allows. Their second and related argument is that where these non-traditionalists enter the occupational scene and are wanting to alter traditional fishing practice, researchers should anticipate the presence of substantial innovation (Miller and Van Maanen, 1982).

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Finally, there is a methodological point to make about Miller and Van Maanen's (1982) work. Specifically, that their approach to collecting ethnographic details of fishing in Massachusetts, that is their adaptation of Spradley's (1980) cultural scene, corresponds with the ethnographic approach used in this thesis to analyse the stages of shellfish harvesting and processing. A more detailed discussion which illustrates Spradley's (1980) influence on the research design can be found in the methods chapter of the thesis.

Research into European fisheries management offers more instances of empirical research carried out in similar field situations. To conclude this short section some of these examples are discussed next. For instance, certain studies involving institutional theorist Holm (1995), for example, similarly investigate commercial fishing and the phenomenon of modernisation by questioning how commercial fisheries actors are enabled to effect change in the institutions to which they belong. This thesis clearly follows a similar context to Holm's (1995) technological and organisational change although, unlike the Alaskan studies mentioned earlier, the Norwegian study is framed as an institutional study. In contrast, as explained before, the research project which is a part of this thesis is better suited to CoP as the unit of analysis. This is because Holm's interest was the interconnection between institutional politics and power, whereas the research interest here is workplace learning and collective action between groups of individuals.

In subsequent Norwegian studies of this nature, Holm can be found collaborating with Johnsen Holm, Sinclair, and Bavington (2009) to conduct a study to conceptualise and understand the sophisticated nature of change in the Norwegian fisheries. Other, indirect associations with Holm's colleagues follow a similar trajectory. These studies reveal closer connections to this thesis on

modernisation and survival of shellfisheries. For example, a recent study by the Norwegian College of Fishery Science investigates small-scale fisheries' involvement in collective action and change (Jentoft and Finstad, 2017). Both studies empirically investigate similar contexts involving small-scale commercial fisheries.

These Norwegian studies, as with Holm's earlier work (1995; 2001), concentrate in the main on herring fisheries and, more specifically, on commercial Norwegian fleets operating in the North Atlantic, but there is an equal level of awareness of the impact of technology and modernisation on small-scale fisheries. An extract from this Norwegian study on what the authors regard as the cyberorganisation of fisheries is recounted here in full to demonstrate their insightful grasp of modernisation:

> "From the late 1960s, when it became apparent that important fisheries resources were about to be overexploited by industrial technologies, the process to transform fish, fishing people and fishing technologies to make them manageable has intensified. This replacement of people by mechanical and institutional systems has changed all relations in Norwegian and other industrialized fisheries." (Johnsen et al., 2009, p. 9).

Set against the Alaskan and Norwegian fisheries, the nature of technological development within the Leigh-on-Sea fishery appears to be on a similar cyberpath with the intensified use of the on-board and shore-side machinery, plus technical advances in the cooking process. Contrasting the cockle and herring fishery studies further highlights the importance of studying the relationship between CoP and modernisation in commercial fishing practice. Besides the parallel of modernisation, Alaskan and Norwegian fisheries, like the UK shellfish sector, also

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face regulatory challenges (Johnsen et al., 2009) which can serve to illuminate how CoP sustain, re-create and transform practice.

2.8 Summary and Conclusion

The last section of the literature review was used to illustrate the researcher's familiarity with previous studies of commercial fishing. One of the more significant aspects to emerge in the preceding section (2.8) is the relevance of the set of empirical works examined to the research project being undertaken for this thesis.

The discussion on the Alaskan and Norwegian studies confirmed that there are clear commonalities in the circumstances within these empirical studies. Basically, from a contextual perspective, these studies are alike. That is, the scholars of these previous works give meaning and shape their studies by employing an inductive and contextual approach to conceptualising occupational phenomena. To investigate shellfish harvesting and production the researcher in this thesis employs a similar strategy. In this respect we can say that the selected works on commercial fishing and the investigation in this thesis are contextually comparable.

More generally, the important conclusion to be drawn from the literature review is that a discussion at the intersection of two adjacent topics demonstrates that CoP can be best understood as a part of understanding the occupational context. This literature review also reaffirms Cox's (2005) point discussed earlier about compatibility, i.e., that whilst CoP continues to appeal to researchers, in scholarly terms it is not always adequate.

Therefore, whilst Management and Organisation scholars appear mostly familiar with Van Maanen and Barley's (1984) occupational community as a sort of ancestor to CoP, for the purpose of developing an analytical framework for this

study, Salaman's (1974) conceptualisation of occupational communities and Wenger's (1998) CoP are more practicably comparable.

There are a number of similarities between Salaman's (1974) model of occupational communities and Wenger's (1998) CoP framework. Reviewing these similarities, but also understanding the key differences between these two concepts, serves to summarise the argument made in this chapter for using an alternative basis for theorising about CoP in occupations. In view of this, the conceptual overlaps between these two theoretical constructs are summarised in Figure 2.2 to highlight the conceptual coherence between these two analytical categories.

A salient unifying theme emphasising the theoretical perspectives developed by these authors is meaningfulness. Salaman maintains that an essential feature of occupational communities is that workers who belong to these communities see their work as "meaningful" and engage in their work in a meaningful way (Salaman, 1974, p. 16). This is similar to Wenger (1998, p. 53) who focuses on "meaningfulness", asserting that his interest in CoP is "in how [these collectives] make sense of their daily activities at work" (1998, p. 123).

Whilst Wenger finds it difficult to move away from speaking about practice in the context of work, in contrast Salaman focuses exclusively on work (and non-work) tasks and skills. There is no mention of practice in Salaman's community and occupation (1974). However, this appears to indicate more of a semantic quibble than any difference in interpretation. Essentially, Salaman's (1974) interest in work situations and workers' relationships in occupations as collectives is comparable to Wenger's (1984) conceptualisation of CoP (characterised as practice associated with community) as a locus for engagement in action-oriented

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work. Both authors prescribe to *work practice* and *work* itself as an act of *doing*. This is consistent with Orr (1996) who avoids using aggregated words such as employment, jobs or labour when studying work practice.

Another common feature is the way the pair denote the notion of sharing as a reference point to comprehend the social arrangements of their respective concepts. Wenger (1998) asserts that the characteristic of shared repertoire (1998), whereby CoP members can "share histories of [meaningful] engagement" to make judgements about their participation in practice, is a source of "community coherence" (1998, p. 82). In contrast, Salaman (1974) argues that a community member's involvement in their work and their attitude towards work are derived from the occupational community to which they belong. A shared reference group, in Salaman's eyes is the nexus of self-contained work-coordination that has a causal effect on the functioning of an occupational community. Community members' meaningful involvement in work and their attitude to work, argues Salaman (1974), sparks and maintains their emotional investment in work tasks. The idea of emotional involvement is comparable in complexity to Wenger's (1998) deliberations about participation in practice. Once again, excepting Wenger and Salaman's preferred designation of practice and work respectively, their emphasis is similar as they are plainly speaking about the same thing: participation is a synonym for involvement.

Figure 2.2 Conceptual coherence between CoP and occupational communities.

Source: Author

Salaman (1974) – uses findings reported in previous empirical studies which he considers are determining factors (characteristics) of **occupational communities**
• Fostering and maintaining a shared reference group - occupational communities see themselves in terms of their occupation role (less likely in occupations which do not have occupational communities (Salaman, 1974). Involvement in meaningful "work skills and tasks" (Salaman, 1974 p. 37) given to be a constant determinant of occupational communities
• Offers a hypothesis about how an occupational community reflects a members' reference group which serves to internalise a common set of "qualities and values" (Salaman 1974, p. 24) which identifies the nature of members of these occupations
• Observes the blurring of boundaries between work and leisure and the existence of preferential friendship groups comprising occupational colleagues participating in (formal) work and (informal) (non)work-connected activities
2 types of occupational community – local and cosmopolitan
Community contextualised as either relational or geographical
Wenger (1998) – uses ethnographic field study data to theorise about meaningful work and workplace learning achieved through participation (and non-participation) in communities and their practices. Proposed a theoretical framework for **CoP**
• Meaning – a way of negotiating meaning by viewing life and the world as a learning system
• Practice – through participation in practice members develop common frames of reference for sharing a repertoire of resources, experiences and viewpoints that can sustain engagement in action and facilitate the development of a mutual sense of identity
• Community – provides a way for members to interact, discuss, share, exchange and mutually learn recognisable competences
• Identity – an inclusive sense of belonging as a means for practitioners to learn (in-situ) and develop in the context of community membership
3 types of CoP – potential, active or latent
Wenger associates community with practice using 3 dimensions (indicators) as a source of coherence: namely mutual engagement, joint enterprise and shared repertoire.

These similarities aside, there are some important differences. For example,

Salaman (1998) distinguishes between types of occupational community as

either local or cosmopolitan. In contrast, Wenger (1998) categorises CoP types

by their stage of development (potential, active or latent). Furthermore, there also

appear to be disagreements on the interpretation of community. For Salaman it provides a way to further distinguish between types of community, whereas Wenger, (1998, p. 5) believes community to be a facet of identity (for example, people see themselves as part of a community), which provides "a way of talking about" organisational participation.

To associate community with practice, Wenger (1998) proposes three dimensions to define an organisational CoP (mutual engagement, joint enterprise and shared repertoire), whereas Salaman (1974) explains the broader notion of an occupational communities characterised by three determinants: occupational identity, the aforementioned shared reference group and the convergence of work/ leisure relationships. In short, there are differences, but these differences in interpretation are not contentious enough to warrant the marked segregation of CoP and occupational communities in the literature. What is more, this comparison shows that there is more to be gained by setting aside what is incongruous and focusing instead on what is comparable, especially if conceptualisations from one construct could be integrated with the other. For example, Salaman's (1974, p. 29) specific point about work being "emotionally important and valuable" has significance as an insight for conceptualising an occupational CoP.

To conclude, this thesis joins the recent call to join a conversation about the conceptual overlaps between CoP and occupational communities (Nicolini et al. 2022). Fusing together a dialogue on occupational communities and CoP to develop the idea of occupational communities of practice (OCoP) is compatible with the research aim set out in this thesis. That aim, in summary is to gain insights into the sorts of social interaction, coordination and collaboration which occur in occupational situations where communities embark on similar

enterprises (Cox, 2005), and develop shared meaning (Hara, 2009), demonstrating their capacity to withstand a sustained period of modernisation. More specifically, the aim is to apply CoP as an alternative analytical framework in the study of the working arrangements of a local community of shellfish merchants in order to achieve the research objectives set out in Chapter 1.

Chapter 3 Research Methods

3.1 Introduction

This chapter contains the detail on how the research was conducted. The purpose of this chapter is to highlight the philosophical underpinnings, describe the arrangement of the selected qualitative methods employed and, recount the ethnographic experience of conducting fieldwork. More precisely, I will describe the methods employed, explain how I generated field data and speak about my approach to data analysis. I explain my qualitative approach and describe the methodological detail for the study. The chapter is divided into six sections, namely, Introduction, Philosophical underpinnings, Ethnography, at an epistemological level, Data collection techniques and Data Inventory, Data Analysis and Ethics. The section on Ethnography includes a sub-section on Visual methods followed by a short historical perspective. I conclude with a tabulated summary (Figure 3.7) of the relationship between my methodological approach and the research aim, expressed as research objectives.

The first step was to read up on selected qualitative research approaches and methods. I began reading in the Ethnography literature, beginning with Van Maanen (1988), and for practical method, Spradley's (1980) step-by-step guide to doing participant observation. The latter seemed procedurally closer to what I was trying to do, whilst the former served as an authoritative voice on and for ethnographic research.

3.1.1 Participants

The industry and group selected for this study, a Thames Estuary based cluster of eight independent shellfish merchants function as both a contributor to the local economy and a small player in the £1.9 billion UK seafood market

(www.shellfish.org.uk). The participants in my study, Leigh-on-Sea cockle fishermen, were observed whilst undertaking their ordinary work of commercial cockle harvesting and processing. The sample was chosen for convenience, based on geographical proximity and willingness to participate in the research. With some contraction in the industry over the years, and because of the seasonal nature of fishing many of the cockle fishermen pursue alternative employment in the closed season.

I concentrated my research almost exclusively on shellfish merchants who were licensed owner/operators. My sample comprised both cockle boat owners (skippers) and crew. A total of 30 participants from this small-scale shellfishery were observed and 8 participants (informants) from this group were interviewed using relatively less structured methods. Participants were observed both fishing (harvesting) and processing cockle. Each of the 30 participants were in the employment of the shellfish merchant enterprises which owned processing factories (cockle sheds) and rented an adjacent strip of foreshore abutting Leigh-on-Sea creek. I was primarily interested in how my participants worked day-to-day, season-to-season. The plan was to immerse myself in my field site to reveal the intimate detail of my participants work lives.

3.1.2 Narrating a first-person viewpoint

The methods section is written in the first-person for three reasons. First, with the researcher positioned as the main research instrument, writing a qualitative research methods chapter using a personal voice is a more compatible style (Tracy, 2010). Second, whilst, it seems (to the author at least) more natural to write this chapter in the first-person, it also serves the purpose of reminding the reader of the researcher's ongoing presence in the study.

As such, writing in the first-person conveys the first-hand access to the familiarity I experienced as I came to understand informants' constructions of their everyday work life. Furthermore, the first-person point-of-view also reaffirms that there was an actual "person standing behind [this] research endeavor" (Van Maanen, Dabbs, and Faulkner, 1982, p. 108) attempting to portray a local, intimate and authentic account of the particularities of their informants' world (Golden-Biddle and Locke, 1993).

Last but not least, writing in the first-person is consistent with a fieldwork technique called participant observation – a key data gathering method devised for this project to learn about what people do in everyday practice. Moreover, a first-person account can be justified because it acknowledges the interrelationship between my role in the research and the production of the text. Van Maanen (1988) is probably the best-known critic of ethnographic writing to endorse this approach. He believes the ethnographer can develop a more convincing narrative style when they are less inclined to hide behind the objective voice found in a third-party account. However, before describing the approach and procedural research methods it is important to discuss the philosophical underpinnings of my work.

3.2 Philosophical Underpinnings

The research methodology was organised around an ethnographic approach designed to conduct an in-depth study of the occupation of cockle fishing at Leigh-on-Sea in England. Immersing myself in this community over an extended period afforded me a unique insight into experience of being a commercial shellfish merchant. I was primarily interested in how my participants worked day-to-day, season-to-season.

I undertook field work between 2011 and 2018, with the research aim of collecting data which would help to generate fresh insight about the social interaction and mechanisms of coordination employed by practitioners in an occupational fishing community. Data were collected over a period of close to 10 years to understand changes in work practices. My scheme of qualitative methods also included document analysis which was used to look at the evolution of my research site since the late 1960s.

Using this ethnographic-historical approach I focused on the process by which meaning is created within the Leigh-on-Sea fishery through a comparative study of ethnographic data and historical documents. To this end I proceeded by holding to the personal belief that, "relevance structures" of everyday life offer investigative processes for synthesising common-sense knowledge (Berger and Luckmann, 1966, p. 60). On this basis I decided that the most appropriate way of collecting data which could generate new insights into the phenomenon of Communities of Practice (CoP) from the field work was to adopt a more subjective epistemological stance (Gill and Johnson, 2010).

Accordingly, the approach I developed was mostly informed by constructivist philosophical values, based on the ideas of social constructionism as developed by Berger and Luckman (1966). This assumption, coupled with a self-awareness that a way of seeing the world should be based on interpretivist belief that human enquiry, which places "emphasis on the world of experience as it is lived" (Schwandt, 1994, p .234) was the main philosophical thinking underpinning this qualitative research design. This is the reason for my commitment to an "eminently useful" qualitative, "theoretical paradigm" of social constructivism as a philosophical approach to "empirical enquiry" as a way to mitigate against

inaccuracies or misrepresentations of social reality (Berger and Luckman, 1996, p.1).

Linking a constructivist epistemological persuasion with an ontological nominalist perspective provided the inclination for shaping the research design using ethnographic methods (Easterby-Smith, Thorpe, and Jackson, 2012). This perspective, as it relates to my ontological positioning, is clarified next.

Characteristically as an ethnographer, I placed considerable emphasis on participant observation as one of the key research instruments for collecting data (Gill and Johnson, 2010). The obvious premise at the ontological heart of participant observation is the nominalist standpoint (Van Maanen et al., 1982). Correspondingly, the stance taken for this investigation was inclined towards ontological nominalism (see Figure 3.1). A position of ontological nominalism induces the belief that people use names and labels to structure their world and the objects in that world (Denzin and Lincoln, 2011). The main thrust of the ontological nominalist argument associated with this methodological framework is that meaning is not located in the physical world, but is instead humanly "constructed and sustained" (Morgan and Smircich, 1980, p. 494). Or to put this another way, meaning is made when objective knowledge is socially and culturally redefined.

This ontological expression as a facet of social constructivism in relation to epistemology and qualitative research methodology is possibly most unambiguously expressed by Schwandt explaining the term *Verstehen*: "The world of lived reality and situation-specific meanings that constitute the general object of investigation is thought to be constructed by social actors. That is, particular actors, in places, at particular times, fashion meaning and phenomena

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through prolonged, complex processes of social interaction involving history, language, and action" (Schwandt, 1994, p. 222).

Whilst there are many competing perspectives in the subjective-objective debate (Morgan and Smircich, 1980), it is the ontological assumptions and epistemological stance underpinning the social constructivism approach which resonated strongly with the world view to which I subscribe, and furthermost attested the plausibility of achieving the research objectives tendered in this thesis. Implicitly, it was this belief that social constructions are experientially based, which became a prevalent decision factor for the selected methods described in the sections which follow. It is in this regard, to reaffirm my ontological affiliation, I agree with Denzin and Lincoln (2011). That is, I hold an ontological opinion that interactions and dialogue between researcher and participants and their associated representations of reality are, indeed, critical factors in creating knowledge (Denzin and Lincoln, 2011).

Hence the decision to pursue an immersive research strategy (Matthews, 2021) to deeply embed myself in my research site (a single geographic location). Consequently, I used an insider lens that allowed me to get up close with my participants. This immersive approach is underpinned by an epistemological ontological orientation swayed toward strong constructionism (Easterby-Smith et al., 2012). However, such a philosophical association was only attainable when I was able to relax certain ontologically positivist persuasions about a concrete structural world view (Morgan and Smircich, 1980), and disbelieve objectivist assertions for documented research to be "uncontaminated" by the researcher (Gill and Johnson, 2010, p.193). An awareness of the relationship between method and enquiry purpose seemed to ease the theoretical agitation about the choice of methods. This made possible the conceptualisation of a less

disconnected methodological framework (method-to-enquiry relationship) which could more effectively foster and make permissible a deepened interpretative treatment of the recorded data (Schwandt, 1994).

A particular strength of the constructivist epistemology's interpretative paradigm is in its ability to look at, trace and analyse change over time from the perspective of those affected by the change (Easterby-Smith et al., 2012). I believed that I could best achieve the research aims of investigating the phenomenon of CoP through my interactions with my research participants. Therefore, I understood that any results I was going to produce could not be presented in an objective independent fashion, but would instead be the output of subjective construction between the researcher and field participants; this was a key contributing factor in my methodological thinking.

There was, thus, a gradual realisation that the final framework should comprise methods that were going to allow me to focus on interaction and social practices and employ the technique of participant observation (Morgan and Smircich, 1980) to observe field work and participate in field work conversations. Arguably, this immersive, participative approach was the most logical way for gathering data about the reality of cockle fishing shaped through the experiences of the Leigh-on-Sea shellfish merchants' exchanges with others.

An overview of the applicability of the research methods to the chosen methodology is depicted schematically in Figure 3.1 which is adapted from Easterby-Smith et al., (2012). Figure 3.1 discerns the epistemological-ontological-methodological relationship relative to the stance I maintained.

Figure 3.1 Linking epistemologies and methodologies

Ontologies	Realism	Internal Realism	Relativism	Nominalism
Epistemology	Strong Positivism	Positivism	Constructionism	Strong Constructionism
Methodology				
Aims	Discovery	Exposure	Convergence	Invention
Starting points	Hypotheses	Propositions	Questions	Critique
Designs	Experiment	Large surveys; multi-cases	Cases and surveys	Engagement and reflexivity
Data types	Numbers and facts	Numbers and words	Words and numbers	Discourse and experiences
Analysis/ interpretation	Verification/ falsification	Correlation and regression	Triangulation and comparison	Sense-making; understanding
Outcomes	Confirmation of theories	Theory testing and generation	Theory generation	New insights and actions

Source: Easterby-Smith et al. (2012, p. 25)

(Key: ⬤ Stance taken by the researcher for this study.)

In summary, the epistemological ontological backbone of the qualitative methods described in this chapter is a belief that our realities are shaped through our experiences and our interactions with others, and that any world reality captured by a researcher is no more than a subjective representation of an interpreted, endured reality created out of people's social interaction. Attempting to see the world in this way from the perspective of those being studied yet making no claim to produce an "objective or truthful account of reality" (Pink, 2001, p.18) are characteristically ethnographic researcher attributes.

3.3 Ethnography, at an epistemological level

Given that I was interested less in the study of people and more in "learning from people" (Spradley, 1980, p. 3) unsurprisingly, from a methodological perspective the traits of my approach are firmly ethnographic ones. These traits correspond very self-evidently to the belief in and preference for qualitative work involving "ontological inquiry" (Van Maanen, 1988, p. 16). The fieldwork entailed "reflexive,

collaborative [and] participatory activities" (Pink, 2001, p.18), the success of which depended upon the participation and cooperation of informants. I described and learnt from the related social situations I encountered alongside my informants whilst conducting fieldwork observations. To this end I took advantage of everyday interactions as a way of gathering data to try to understand my research participants' lived experience of being a shellfish merchant.

Field work was the defining method of this ethnographic study (Van Maanen, 1988) and "the nature of the most fundamental task of all [this] fieldwork", I learnt, was "doing ethnography" (Spradley, 1980, p. 3) in the field setting. I was interested most in the place, the actors and the activities (practice) as a way to understand why the shellfish merchants see things such as modernisation in a particular way.

The acquired data were, to use Van Maanen et al.'s words, "drawn primarily from naturally occurring conversations with persons [in] less-structured situations" (1982, p. 105). The data served, in effect, as a disclosure of insider accounts of the experience of being a cockle fisherman, from the perspective of my participants themselves. Shifting towards thinking like a shellfish merchant (Shouten and McAlexander,1995), helped me to understand the local practice of harvesting and processing cockle.

The specific unit of analysis was the shellfish merchants as both individuals and as members of a CoP. The focus was the situation of the shellfish merchants' close physical proximity to each other and their intricate social interconnections of individual influence and action. Qualitative methods were employed to examine and to make sense of the ways that the shellfish merchants worked together to sustain their livelihoods. This involved the use of selective qualitative research

instruments to permit participants to casually define their ordinary, ritualised work routines, as they became objects of observation in a field study situation.

I practiced ethnographic methods, specifically the technique of participant observation as mentioned earlier, and sought to interpret the actions and interactions of these shellfish merchants for the purpose of obtaining knowledge about their social world of work. The results are therefore based very much on my interaction with participants. As such this is my story with my participants. A key part of this story is the shellfish merchants' relationship with their practice, their physical place of work and their interaction with material artifacts associated with their everyday routines.

As a mode of anthropological research ethnography, "the process of recording and interpreting another people's way of life" (Kessing, 1981, p. 5) is hardly a new approach. Within Management and Organisational studies this approach has gained increasing acceptance amongst many social scientists as an insightful research technique (Bell and Davison, 2013). Nonetheless, the use of qualitative methods such as ethnography does deserve a wider audience (Blackmon, 2006).

3.3.1 Ethnography research and case study

Case study and ethnography can be regarded as complementary idiographic approaches (Bryman and Bell, 2003), although Palsson (2007), writing in another Business and Management discipline, explains that, at a tools and techniques level, there are distinctions to be made because participant observers, such as ethnographers and case study researchers, can be set apart by their partial and primary diagnostic usage of interviewing, respectively. Attuned to such distinctions yet acceding to the unambiguous view that although not all case studies are qualitative, all ethnographic research involves case study (Brewer,

2002), I instilled an alternative idea in this context. Simply put, I considered ethnography to be a pre-eminent way to achieve what Kessing (1981) and Matthews (2021) describe as deep immersion in field study work.

Regardless of the differences and similarities, it is still fundamentally important to make explicit the special features (Blaxter, Hughes and Tight, 2002) of the selected methods in order to recognise the weaknesses of collecting data for a case study via participant observation and ethnographic interview. Specifically for this investigation I acknowledge the small sample size and limiting generalisability (Yin, 2009) in conducting an in-depth study. However, some scholars have challenged this criticism of ethnographic research, asserting that it is feasible to generalise findings from a single-site study to theory (Klein and Myers, 1999). Myers (2019) is similarly reproachful on this criticism asserting that, essentially, generalisability is more a circumstance of the newness of ethnographic research in Management and Organisational studies than a limitation of the approach. Finally, on the subject of generalisability, it may be possible to broaden other aspects of the research findings from value chain analysis, which when used to document the sequencing of work, is a more unspecific coding instrument.

Typically, as with many ethnographic studies, the strategic intent from the outset of this project was to get close to (Fisher, 2004), "blend in and learn from" (Maylor, 2005, p. 144) those being studied in order to generate data. As the participant observer (Hammersley, 2004) attempting to both listen to informants and watch actors (Spradley,1980), I was positioned at the very heart of the research process, yet on the very periphery of the activities and situation I was describing. For the purpose of collecting data, the strategy I employed was essentially a participative one. Situating myself in the field site each season I became

immersed in the work of my participants. This was an effective means of collecting data as I was allowed to wander about, observing and understanding what people (actors) were doing in a chosen setting by participating directly in what they were doing (Brewer, 2002).

Participant observation, however, was not the only data collection method employed here. Brewer (2002), citing Burges (1984, p. 15) helps to rationalise the affinity I held for conducting field work using more than a single qualitative method. Multiple methods were certainly a feature in this particular field study where several qualitative methods were fused together: in-depth (informal) interviews and systematic observations (Emerson, 1995), away-from-field correspondence with key informants, value chain analysis (Porter, 1985) and supplementary, visual ethnography techniques such as re-photography and the decoding of phototrophic images. Characteristically, this scheme of methods was more often than not rather less structured, flexible, open-ended, and emergent. Methods, similar to data was emergent in as much both were based on my interactions with participants (Matthews, 2021). This bricolage effect of consistently deploying multiple interpretative techniques was valuable as I was able to draw out and pull together participants' (Rudestam and Newton, 2001) "tacit cultural knowledge" (Spradley, 1980, p. 11) about the proprietary specialism of cockle harvesting and processing, the unwritten procedures regarding shellfishery practice as well as the occupational traditions associated with this local community.

3.3.2 Justifying the research approach

Ethnographic interviews are unlike other qualitative ways of doing research, such as formal interviews which requisition a response to fixed questions (Herbert,

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2000), or action research, which focuses on research in action, based on a preliminary theory that is tested (Cagliano et al., 2005) with the primary purpose of bringing about change (McNiff, 1999). I was not actually intending to create change or cause uneasiness to participants and for this reason I chose not to use focus group techniques that are more inclined to rely principally on what people say (Bryman and Bell, 2003).

Ethnography, in contrast, tends to bring together multiple perspectives in what Van Maanen et al., (1982) equate to a trinity of data collection methods. Whilst my scheme of methods similarly featured three key methods (participant observation, ethnographic interview, and photo-elicitation), I also used various other interpretative techniques as described already.

The aim of such multimethod qualitative inquiry is, according to Van Maanen (1988, p. 35), to represent what people say, do and use in the form of an impressionist's tale which is "always subject to multiple interpretations". The advantage of using selected face-to-face methods here is that it allowed me to get as close to my participants as possible in their own community setting and to "observe and question" (Van Maanen, 1988, p. 39). This allowed me to appreciate and characterise the people and practice of interest. In this respect, an ethnographic approach was considered because I was able to listen attentively to what people say, both one-to-one and one-to-several, while at the same time observing what people do and what they use. I found that applying this in-depth and open-ended approach in the field work was time-consuming, but it did help to reveal what was really important to the people being studied, as opposed to only examining say, the organisational, the transactional or the infrastructural phenomenon. Moreover, I would claim, as does Becker (1974), that it was precisely the in-depth, immersive nature of this research and especially the

incorporation of photography, which provided the opportunity to return a more sociologically rich and analytically thick ethnography. In this ethnography the investigative deepness achieved through my immersion provided a basis for gathering and organising the field notes for the purpose of interpreting the research data. As explained already, this ethnography includes the use of visual methods. For this reason key theoretical perspectives emphasising the use of visual research are discussed next.

3.3.3 Visual methods

There was more than a single data set. The collected and generated data were a mixture of textual and visual records obtained by analysing documents in the form of pre-existing photographs and what Tinkler (2013) refers to as researcher-generated photographs. My participants were hugely influential in shaping the meaning of these images which was crucial to understanding (interpreting) what the photographs represented – both noticeable and hidden meaning.

Focusing on the socially constructed meaning embedded in these photographic images necessitated increasingly adopting a reflexive approach to seeing the data (photographs) as portions of previously shared stories by my informants (Steier, 1995). The visual data helped to substantiate "what participants said they [were] up to against what they actually [did]" (Burawoy, 1991: 2)

From thinking carefully about how the field notes and photographic data were recorded and categorised, I developed a greater reflexive appreciation of how visual methods had offered "new ways" for "representing and using fieldwork" in ethnography (Van Maanen, 1998, p. 139). The experience of incorporating a visual element in this particular scheme of methods proved to be an appropriate approach for collecting ethnographic data. Moreover, it was the photographs

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which strategically enhanced the "ethnographic encounter" (Tinkler, 2013, p. 127) and thus helped to ensure that the interpretations generated from working with the shellfish merchants of Leigh-on-Sea were "as loyal as possible to the context, negotiations and intersubjectivities through which the knowledge" had been produced (Pink, 2001, p. 18-20). Furthermore, these photographs enhanced my historical perspective.

Concurrently, this led me towards document analysis which involved locating and gaining access to documents and collecting data from them. For the most post I scrutinised archival material such as photographs, postcards and old news reels. I then used the technique of photo-elicitation interviews (Rose, 2016) to document a comparative visual account of change in the Leigh-on-Sea shellfish industry since the mid-1950's. This was achieved through semi-structured conversations in the field whilst holding and looking at present and past photographic images synonymous with the Leigh-on-Sea fishery. Looking back from the present to the past from my base years (2011-2018) with my participants allowed me to develop an account of the shellfish merchants' own version of historic events, experiences, and practices subsequently perhaps abandoned. Co-creating a chronology of the change in this way provided for, as Leblebici, Salancik, Copay, and King (1991) advocate, a historically grounded interpretation of the shellfishery's modernisation journey.

Some research practitioners have begun to justify instruments such as participant observation influenced by ethnography and supplemented by visual methods for more in-depth immersive studies (Rose, 2016). Nevertheless, the literature suggests that widespread uptake of extended qualitative methods incorporating visual aspects, in reality can certainly not yet be regarded as hard core in institutional research. Whilst the use of visual methods in ethnographic research

is not extraordinary (Pink, 2009), Management and Organisational studies scholars have, for their part, somewhat neglected the use of visual methods and visual data in research (Vince and Warren, 2012). Moreover, the use of visual analysis as part of a set of methods in investigating CoP is for the most part not a regular pursuit (Bell and Davison, 2013).

For the purpose of ongoing data collection, photography was increasingly used in a reflective way as a descriptive and analytical medium to produce what Banks and Morphy (1997) term a multidimensional effect. Progressively the photographs served as a type of informant feedback too. Besides testing the validity of insider accounts, the photographs were received with interest by my participants and brought me an increased level of confidence with the study group. This was not intentional but was beneficial because it provided an opportunity for the informant and researcher together to contrast their own versions of what was in an image. Analysing the photographs critically (Rose, 2016) in this way, thinking not just about what was in the image, but also considering where the photograph was produced, helped me to understand what this visual data meant to the shellfish merchants (Tinkler, 2013). Importantly, this approach would also sometimes extend my informants' story telling space, which resulted in less researcher interference (Van Maanen, 1998).

I should add that experimenting with photographic narrative presented an opportunity to both conserve the field data captured during observation and often revealed a story far more complicated than the one told to me by my informants (Harper, 2012). I was also able to interpret as I observed and in so doing synthesise information and connect this new knowledge to concepts. This contextually enhanced the research outputs by creating what is described as a visual dimension of "what is there" (Banks and Morphy 1997, p. 25), and also

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served to influence the research strategy in the direction of visual analysis and interpretation. As I have suggested already, interpretation of what an image represented was not always consistent. Furthermore, participants' reading of what they were seeing in an image sometimes changed in different contexts.

I used photographs as visual research instruments on different levels, to document "topics of investigation" (Ball and Smith, 1992, p. 14). This type of investigation and interpretation can be discussed theoretically; for example, Harper's (1988) theoretical levels, or modes of research, as depicted in Figure 3.2 are the scientific, narrative, reflexive and phenomenological. Harper's (1987) concept of four modes for practicing visual analysis seems not so much an attempt to construct a mutually exclusive set of concepts, but more a fluid, conjoined theoretical tool intended to help maximise what can be learnt from a photograph for the purpose of generating photo-interview data. I used Harper's theoretical frame in precisely this way, alternating between the four modes shown in Figure 3.2., to influence the orientation taken towards the interpretation of internal narrative in the images I encountered (Banks, 2001, p. 178).

This approach to analysing photographic images, I believe, suggests that in this study of visual data I was moving beyond what Harper (1988) regards as the more (mere?) conventional scientific practice of using photographs as storage devices, as I became equally concerned with the phenomenological features of the photograph. I managed, with the informant's involvement through photo-elicitation to experiment with the re-conceptualisation of what these photographic images represented and revealed, phenomenologically in abstract form (Emmison and Smith, 2000). In part this meant taking a reflexive approach, to provoke fresh interpretations and thereby create new knowledge from specific aspects of both found photos corresponding to the Leigh-on-Sea fishery and

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photographs I had taken in the field to document my observations (Emmison and Smith, 2000). Looking at and talking about old images of Leigh-on-Sea was particularly useful for gaining a historical perspective. Using old photos triggered informants' memories in photo-interviews (Tinkler, 2013) and helped to validate the character and identity of Leigh as a dynamic landscape (Ingold and Vergunst, 2008) yet a workplace of some permanence. Interpretation of such memories from different places and time periods served as a type of decoding. Decoding that is, by tapping into cockling narratives from different time periods to make sense of and offer new perspectives about Leigh-on-Sea as a distinctive and historical place. This also helped to make sense of the modernisation that has occurred and offered insight into how the shellfish merchants over time have influenced the mechanisation of cockle harvesting and processing practice. The use of photography for this type of visual inquiry as Emmison and Smith emphasise, proved to be "ideal for studying change" in the context of the Leigh-on-Sea fishing community, (2000, p. 29)

The idea that a photographic image viewed on different levels can carry "multiple narratives" (Banks, 2001, p. 15) also served to further highlight the subjective nature of visual data I was analysing. With an increased level of awareness about how a photograph can be used as a visual research instrument, for instance in photo-elicitation, I was reminded of the inescapable personal dimension that I, as the researcher, and the participants brought to the study from using an ethnographic approach - a personal dimension including, amongst other factors, subjective knowledge, singular experiences, personalised histories and individual predispositions. An example of taking a reflexive approach and thinking phenomenologically about an image is discussed next.

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Figure 3.2 Research involving the use of photographs

The scientific mode Standard use of photography –storage device ideal for studying social change in communities	**The narrative mode** for studying social life/cultural stories - useful for adding rigor
Reflexive mode subjects/informants involved in the process – e.g. photo elicitation- used as prompt to generate more verbal information	**Phenomenological Mode** involves eliciting ones own knowledge through photographs- incumbent in reflexive mode as researcher and subject

Methodological frameworks for visual sociologists

Emmison's (2000) critique of Harper's 1987 framework

Source: Author, adapted from Harper (1987)

A photographic image, which after it was taken caused me to reflexively examine more closely, would be categorised as belonging to the bottom right quadrant in Figure 3.2 as an instance of phenomenological thinking. For example, cognitively, I had reasoned a connection between the low yielding shellfish catch unloaded by a disappointed key informant, to a more personal dimension that I had experienced in my youth of my grandfather's experience of farming blighted potatoes, which he would regard as a bad harvest. From a research methods perspective, such deep interpretation offered considerable insight into the potential power of memory recall and the analytical properties of visual analysis.

After this experience I contemplated how the researcher and informant, in their separate, temporal worlds, past and present, were perhaps not so separate after all in how they were trying to make sense of their respective realities. This demonstrates, I suggest, how thinking reflexively and phenomenological about a visual image can produce different versions of knowledge construction which sometimes overlap. In thinking phenomenologically about an image, a researcher

(and/or participant) could be said to be coming to terms with a place, an artifact, a practice or a culture. A deeper and reflexive meaning-making mode of analysis like this can aid an ethnographic researcher with the development of an impressionist tale (Van Maanen, 1988). What is more, exploring continuities between different personal and professional uses (Pink 1981) has the potential to extend the application of visual methods and images, especially in retrospective fieldwork (Okely, 1994). Fredrick Steier writing about how "reflexivity" like constructionism makes demands on the researcher concurs (1995, p. 152- 156). Other, more specific examples of phenomenological visual thinking related to the research findings are included in the results chapter. These examples allow me to illustrate how I was studying an old topic (CoP) in a different way (Harper, 1987).

3.3.4 Taking a historical perspective

Early field conversations with informants and observational data revealed both an individual influence and a collective sense of the past embedded in material artifacts (for example, occupied space and the physical place, buildings, equipment, industrial machinery, and older photographs). This is demonstrated through the preservation and conservation of artifacts in the local heritage centre but also in the way the jumble of abandoned machinery is interwoven with the shellfish merchants place of work. My participants, I soon concluded, had clearly developed a strong sense of place and a spirited heritage which I interpreted to be spill-over from bygone traditions and practices. The noticeable value participants placed on old versus new ways of working justified taking a historical perspective.

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Tracing the "triggers and processes" of institutional change (Micelotta et al. (2017, p. 1899) in this way showed how significant technological advancements empowered the CoP to develop more sophisticated practices. This historical perspective permitted me to illustrate a local community routinely effecting, and being affected by, ongoing change over time. I used this data to interpret how a local occupational CoP had withstood a sustained period of modernisation.

A distinct connection and comparison to previous work that adopted a historical approach was found in a visual ethnographic study of coal mine work. Following a procedure of visual analysis, Margolis (1998) used found and archive photographs to conduct a similar analysis of work (labour), machines and change. In the same author's critical commentary of these methods there are suggestions that visual data tends to cause the "the technological function" of work to be "foregrounded" (Margolis, 1998, p. 8). The visual historical-ethnographic methods used by Margolis (1998) to conduct his study and this technique for integrating visual data in an ethnography have been recycled in the research methods I have used. The influence of visual data as it relates to the research findings is discussed later in the thesis.

As such, understanding what happened historically in the tradition of cockle fishing by, for example trying to confirm shellfish merchants' interpretations of "scattered traces of past events that have made it to [their] present" (Martin, 1993, p. 29), was a central research strategy I employed for this study.

The final historiographical point I wish to make here is an epistemological one. Under cover of qualitative research about CoP this was first and foremost an investigation concerning historical matters. In Wenger's (1998, p. 83) terms, it is "a history of mutual engagement" which has created a shared point of reference

for the practitioners in this study to take meaning from their attachment to the past.

3.3.5 Ethnography and CoP

Ethnography, then, including visual ethnography, unlike other qualitative methods such as surveys or questionnaires can, as this study has shown, potentially provide a means for an incumbent researcher, as an outsider, to learn from insider accounts about specific local competencies (Herbert 2000, p. 556) and contexts. I tried to balance being an outsider and an insider through a moderate level of participation (Spradley, 1980) and through this approach managed to acquire a distinct and quite generous view of the shellfish merchants' representations of their modernisation journey. Reflecting on this methodological approach, I would contest that a critical contextual factor was being able to consider, ethnographically, the cockle fishermen's endeavours as "situated practice" which Orr (1996, p. 10) says involves studying work performed in the situation in which the work ordinarily occurs.

Looking for empirical indicators of the existence of a CoP therefore, clearly necessitates greater insight and a deeper level of understanding than can be achieved by other, alternative qualitative approaches. Consequently, given that ethnographic research is so well suited to providing rich insights (Myers, 2019) and is highly suitable as an interpretative method, it is surprising, as Murillo (2011) points out, that few Management and Organisational scholars have produced ethnographies in the tradition of Wenger (1998) and Orr (1996) or Gherardi (2006) to theorise about CoP. This study, therefore, provides a methodological opportunity to respond to Murillo's (2019) call for more organisational ethnographers to empirically investigate CoP. The remaining sub-

sections in this chapter detail the stages taken to complete this ethnographic study, namely data collection and data analysis.

3.4. Data collection techniques and Data Inventory

I use this next section to describe and justify the selected methods and research instruments used to collect and analyse field data.

3.4.1 Accessibility

Having been formally granted access to the solicited study group by Kent and Essex Fisheries to conduct prior research, I was ready to conduct a familiarisation visit. The suitability of the field site as a place to conduct ongoing research and the feasibility of taking an ethnographic approach quickly became apparent. The next step was to identify shellfish merchants who would be prepared to participate in the study.

By holding an initial two-hour meeting with a representative from the group of enterprises intended for the research, I was able to explain in outline the purpose of my research. This meeting took place in early 2011. As I was known to the shellfish merchants' representative because of my involvement in a different research project at the site, this earlier acquaintance appeared sufficient to win the confidence of the group's representative to secure agreement for the study to proceed. The field site was familiar to me because for several years I had resided in Leigh and still had family within close proximity. These local connections eased the logistical challenge of making ongoing visits to complete the field work. The study which began in 2011 has since spanned nine full fishing season cycles, during which time I regularised a series of seasonal field visits. During these visits I scrutinised the full range of work activity undertaken, expressly searching, harvesting and processing cockle.

Although I felt rather ill at ease at the outset, what I learnt during my inaugural fishing season helped me establish a pattern for ongoing visits. This in turn helped me find my place in the Leigh-on-sea cockle community, albeit as an outsider.

The shellfish merchants' representations of their interpretation of these photographs converted usefully to research evidence for the purpose of augmenting the subsequent analysis and discussion. The recorded data, both diarised text and photographic images, represented one version of reality determined by people constructing their own realities rather than a separate, objective reality created for them by external factors. Examples of both forms of data are provided in the later sections of this chapter.

3.4.2 Compressing time for the purpose of data collection

The data that emerged from the study proved to be usable and useful. For example, data recorded in field notes and data collected through photo-elicitation started to shed some light on what I interpreted to be a complex array of behaviours and interactions played out against a background of competition, yet cooperation and the sharing of practice. Specifically, I was interested in data which could contribute to theoretical arguments about locally structured occupational CoP (Nicolini et al., 2022).

The practicable burden of presenting insider accounts and actions recorded over the duration of this investigation meant that the time varying attributes, that is to say the exact moment of time in the day, the precise day of the month, and sometimes even the month itself have mostly been collapsed into annual fishing seasonal series of data. For instance, I talk about yield in 2011 versus yield in 2017 or contrast field photographs taken in 2013 with photographs of the same

location in 2017. The immersive nature of this study and the focus on longer term change over close to a decade meant that there had to be this capitulation over precise date and time stamping individual collections of data within a particular fishing season. I decided to compress and aggregate data records at a seasonal level rather than record micro-time observations. Accordingly, I appended systemised season time stamps to data but omitted the precise time or day denoting instead, for example, the *2015 fishing season.* I found no discernible impact on the quality or accuracy of my attempts to represent seasonal fishing rituals from recording data in this compressed way.

Furthermore, treating data in this aggregated fashion was consistent with the research aim to learn about the normalised seasonal practice of my participants at a CoP level of analysis. For instance, expressing the data in this narrative form allowed me to focus on patterns of processes rather than meticulously record the date and time of each individual observation and photograph. By journaling the textual and visual data in this way I was aiming to create a vivid picture of the seasonal episodes of work-life reality I had discovered. I did nonetheless keep a reflexive diary detailing my field observations, photographs, and interactions. Diarising my research practice in this mode was an especially useful method for thinking about the precise seasonal moments and events captured "in space and time" (Tinkler, 201, p. 127).

I had two reasons for categorising data on an annual fishing season basis. First and foremost, from what I experienced and observed I noticed that this system for ordering the data was closest to the way the shellfish merchants ordered and constructed their "worlds and histories" (Pink, 2001, p. 105). That is, the shellfish merchants made sense of and represented their everyday reality with reference

to tide times (highs and lows, and ebbs and flows) rather than clock time, and fishing seasons as opposed to a particular calendar day or week.

The actual day and precise time in the context of my immersion in my research site was, therefore, as unimportant to the researcher as it was to participants. This reflects my relationship to the field situation and how I became familiar with my informants' everyday world of work. What was more important than capturing the precise day or time of day for the purpose of achieving the research aim was to accurately, represent the regular, reoccurring, day-to-day activities. To this end, categorising data according to the value chain framework (Porter, 1988) in a logical sequence allowed me to make sense of the normalities of shellfish work.

3.4.3 Collecting data through selected observation and interview

To conduct more in-depth observations of key features of the Leigh-on-Sea Cockle Fishery situation, I developed some questions to guide the observation process. I formulated the questions by adapting Spradley's "descriptive question framework", which proposes nine social situational dimensions: space, actor, activity, object, act, event, time, goal and feeling (1980, p. 82-83). The questions I developed were used to guide the ethnographic interviews in an attempt to reveal the occupational nature of the shellfish merchants' work. Once I had formulated these specific ethnographic-interviewer questions I then asked these questions of myself and came up with "the answers from fieldnotes or new observations" (Spradley, 1980, p. 123) and revised my interpretations. Accordingly, these questions provided the selected focus for making descriptive observations within the Leigh-on-Sea fishery, without ever achieving "the skill or status of a regular" shellfish merchant (Spradley, 1980, p. 123).

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The questions were not piloted but served as a foundational and ongoing reference point to guide conversations with my informants. On occasions I would adapt this format when conversations provided the answers to questions I had not considered asking. I did not seek to persuade my informants in the matters they wished to speak about. Instead, I simply sought to show a genuine interest in understanding shellfish practice, without the need to conduct formal interviews. As each season passed, I found myself less dependent on these questions, treating my informants in a less passive way.

Here are the questions, inclusive of some added historical dimensions, that guided the participant observation and ethnographic interviews towards achieving the research objectives:

Space: Can you describe the physical spaces that constitute the Leigh-on-Sea fishery?

Actor: Can you describe all the independent shellfish merchants who are licensed to operate short-sea dredging vessels in the Thames Estuary, and process their catch in the factories at Leigh-on-sea?

Activity: Can you explain how the current practices of searching, dredging, harvesting and processing of cockle have evolved related to the social situation and increasing modernisation?

Object: Can you describe in detail all the material objects and artefacts that are present, were present but have disappeared, or will appear in the future? (Here the focus could be on either present practice during my base years, 2011-2018, or up to 50 years preceding the present. The time period would depend on how long an individual had been a practicing cockle fisherman.)

Act: Can you describe the acts (single actions that people do) and explain the way that acts are performed by actors?

Event: Can you provide an overview of the sequence of events from the perspective of a Leigh-on- Sea shellfish merchant?

Event (historical): In what ways have major events or incidents changed relationships amongst shellfish merchants?

Time: Can you describe in detail the time periods before, during and after an annual cockle harvest season and how actors and activities fall into these periods?

Time (historical): What are all the ways that time affects or has affected objects and practice?

Goal: Can you describe in detail all the things the shellfish merchants are trying to achieve?

Goal (historical): Can you recount all the things the shellfish merchants have achieved?

Feeling: What are all the emotions and feelings toward space, actors and activities objects, artefacts and physical buildings, events, time and goals, and how are these expressed?

3.4.4 Data inventory

To exhibit the research data, I created an inventory of data categories and related documents. Figure 3.3 tabulates the type and amount of data collected and highlights the pattern of collection categories across the duration of the field work.

Figure 3.3 Key data categories corresponding to each fishing season

Time period	Number of participants in the study	Number of interviews	Number of boats	Number of photographs taken	Number of archival photographs analysed	Number of documents analysed
July - August 2011	6	8	3#	24	8 + film*	16
June - August 2012	24	12	7##	35	4	3
June - August 2013	15	6	7##	60	36	1 ~
June - August 2014	12	7	7##	22	10	1~
July 2015	12	5	7##	17	2	3
July - August 2016	10	7	1 (Sophie Jayne)	5**	12	8**
June - August 2017	9	9	1 (Sophie Jayne)	16	5	1
August 2018	9	0 <>	1 (Sophie Jayne)	40	16	11
Key # Mollusc Lass, Paula Marie, Sophie Jayne ## Indiana, Renown, Liberator, Renown VI, Mollusc Lass, Paula Marie, and Sophie Jayne * 3 short video recordings. Duration 55 minutes **Heritage Museum documents ~ Pathé newsreels <> Purely observational, no interviews						

The group being observed included all key stakeholders working in the immediate operating area. During the height of each of the eight fishing seasons (July-October) up to twenty-four personnel were being watched from a distance, while operatives observed close-up during this period rarely numbered more than six at any one time. Mostly the observations and interviews centred on the crew of one particular vessel, and the associated shore-side operatives. A cockle boat crew typically comprises of 2 to 3 operatives plus a skipper.

Observations spanned the length of a selected activity, i.e., up to 6 hours per round trip to search and dredge for cockle, up to 2 hours per cockle boat unloading and up to 3 hours for processing a cockle full catch. Some participants were observed multiple times performing a particular activity, and the same informants sometimes interviewed more than once during a visit.

It would probably have been too complicated to immerse myself in multiple independent enterprises each operating their own cockle boats and processing their discrete catch. For this reason, and by virtue of accessibility, from this population of twenty, eight informants and two key informants were informally interviewed at mutually convenient (to researcher and interviewee) times. The proprietary key informants fell most comfortably into this role. The majority of the participant observation and field interviews were undertaken inside, or in close proximity to number 5 Cockle Row - mostly the latter.

I wanted to collect field data on the cultural patterns my participants were using to carry out their routine work, and to make sense of their relationship with their community and their workspace. To this end, each fishing season I made careful field notes. I took notes of casual conversations, jotted down respondent's responses to less structured questions and recorded informant's reactions to photos they were shown. I also collected local newspaper clippings and images from local and national archives.

This made up a major part of the ethnographic record, which comprised an amalgam of shellfish merchant terms and observer terms. I found myself using the designations shellfish merchant, cockle merchant, cockle fishermen, shell fishermen, fishermen and cockler interchangeably to describe the identity of my informants. The ethnographic record became the sum of the action observed,

that is the pattern and reality of seasonal, daily work routines alongside any evidence of interaction between the shellfish merchants, so as to holistically depict what Spradley (1980, p. 141) calls "subsystems of cultural meaning".

The involvement of a small group of participants in the investigation and analysis was a critical research success factor. Initially I used post-field visit correspondence with key informants to check for any distortions in what I had documented and where necessary to check for clarification, mostly around technical information. One instance of clarification, for example, necessitated understanding the technical exactitude the fish merchants made between *heat* and *penetrative heat*; an important distinction and a proprietary piece of technical information for understanding the technical nature of the processing operation. Informants revealed this most "pertinent fact" (Van Maanen,1988, p. 132) to illustrate that the critically important factor for successfully cooking bulk cockle is to ensure that cooking temperatures are consistently controlled to penetrate the cockle meat during processing to mitigate the risk of diarrheic shellfish poisoning (www.shellfish.org.uk). This fact, when validated with other informant narratives, appeared to justify the shellfish merchants' investment decision to automate each of their cockle processing factories in the 1980s. Further examples of piecing together and clarifying an understanding in this way to make sense of the observed "work practice" and social interactions "that come into being around the work" (Orr, 1996, p. 149) pepper the ethnographic account I produced.

3.4.5 Data collection using participant observation

As stated already, an ethnographic feature of this fieldwork was the prevalence of participant observation. I think it is accurate to use the term *participant observation* because the cockle fishermen became accustomed to the presence

of the researcher and his style (Emerson, 1995), observing and writing-up notes as the primary method of collecting data. Specifically, the research strategy was to become involved in observing from a distance and close-up as well as talking with operatives and owners. The fieldwork was successful, in as much as I was able to observe, collect and "filter" informant revelations about everyday 'happenings' (Van Maanen, 1988, p. 133) in the world of shellfish harvesting and processing.

The current proprietors of F.A. Emery, G.W and S.J Dell, skipper of Sophie Jayne, were informant and key informant respectively. A second and third informant were the regularly employed members of the Sophie Jayne crew. A fourth and fifth informant were part-time and retired operative respectively. Several further informants, – operatives from competitor cockle boat crews, also occasionally participated in informal interviews. A typical day in the field would begin with me hanging around F.A. Emery's shed at number 5. Initially I regarded this as my researcher-participant meet and greet point. Although within a couple of fishing seasons I looked on this more with cockle fishermen's eyes as my home or hub from which I would go and return. Even when shed number 5 was not open, I would still start and finish my observations form this place. Some visits made before and after the season heights were more productive for collecting and recording data through longer conversations, without the interruption of routine operations.

3.4.6 Field notes and photographs

Ethnographic interviews took place at the field location in the beach area, inside the processing factories and sometimes on fishing trips. These interviews inevitably began with a sense of uncertainty (Spradley, 1980). As a novice

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ethnographer this was a cause of quite deep anxiety to begin with, but this lessened with the increased frequency of visits as the rapport moved smoothly through exploration, cooperation and onto full participation (Spradley, 1980) in discussion about what the informants knew about their work and their industry. These conversations ranged widely over many topics: sometimes shellfish merchants suggested what was significant. Matters that were of importance to the shellfish merchants and also topics which I was theoretically interested in established a strong ethnographic focus for a more in-depth analysis. The topics selected were clustered around one domain (Spradley, 1980): the stages involved in harvesting and processing together with the sequence relationships in this work.

As informal interviews developed, the dialogue would typically follow a question-answer sequence, as this field note excerpt demonstrates:

Operative-informer A when asked: '*So, how long is it going to take you to process this catch?*' (Question posed after operative retuned to the beach zone after a six-hour trip)

To which they answered: '*To process this load will take around 4 hours, although* (operative sighs) *it's the cleaning down and shutting down we have to do that is a drag* (hindrance) *as this regularly takes a good couple of hours- but we dare not short cut the process…*' (I interpreted this to infer a critical need to control quality standards).

At all stages I was never without a notebook, into which such data would be immediately entered. Field data was collected in the form of jottings (Van Maanen, 1988) whilst moving between observing "with an eye to writing about a range of incidents and interactions" (Emerson, 1995, p. 29). Initially first

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impressions counted for everything, but with ongoing observation-ethnographic interview research came increased empathy and fresh interpretation about what was anticipated as strategically and collectively important to these shellfish merchant enterprises and their operatives.

These jottings only ever captured fragments of the dialogue together with any feelings expressed. The aim of such field notes was, as Emerson (1995) expresses, to evoke recall about what happened and any special context in which it happened. I experienced considerable trial and error en route to learning what most aided memory recall for the purpose of writing up the full notes. In seeking to find "the most appropriate way to represent different aspects of [the] ethnographic experience" (Pink, 2001, p. 135), as stated earlier, I became increasingly reliant upon photographs as a way of encouraging informants "to engage in a more dynamic process of remembering" (Tinkler, 2013, p. 186) what they were doing and why.

A recurring theme in the data was the use of, and participants' relationship with, machinery and technology. As I refined the ethnographic approach (Spradley, 1980), the investigation increasingly focused on the shellfish merchants' work in the context of change. As data was brought together from multiple sources *change* as a theme developed into a dialogue about collective action, modernisationion, altered practice and improvisation.

3.4.7. Writing up the field notes

The process of reflecting upon and writing up the accumulated notes was undertaken before I completely withdrew from the field location. By operating concurrently in a threefold mode of observing, interviewing and writing, I was again able to further clarify certain technical details with members of the study

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group. I formalised the research data and shared some of the findings with key informants as the ethnography progressed to mitigate any researcher unreliability (Rudestam and Newton, 2001). An example of participant and researcher photo-elicitation collaboration from this approach is a poster output comprising data from field notes supplemented with photographs I took whilst observing my participants. In this instance these visual images and written-up field notes became a co-created research poster (Figure 3.4) To collect and analyse the data to produce this poster I combined the techniques of participant observation, ethnographic-interview, taking field notes, sketch-mapping, and photo-elicitation.

Figure 3.4: Cockle poster. Source: authors' field notes, observation interviews and field photographs

The poster was produced in triplicate. I used one copy for subsequent academic conference presentations. A second was presented to the Leigh Society Heritage Centre, and the third given to the research participants - the proprietors of F. A. Emery. Figure 3.4 also illustrates how the visual research methods I employed were fashioned out of my interactions with the shellfish merchants in situ (Pink, 2001) to "prioritise the participants perspective" (Pink, 2012, p. 59) and avoid a preconceived (researcher) notion of what constitutes cockle harvesting and processing.

3.4.8. Documenting the observed work - using value chain analysis to code the data

An analytical technique which provides a useful way of representing businesses involved in making and moving physical things is value chain analysis (Ward and Peppard, 2002). The value chain approach distinguishes between primary business activities, structured as a linear grouping of five value-adding functions (inbound logistics, operations, outbound logistics, marketing and sales, and service) and certain support or secondary activities. The management concept is described extensively by Michael Porter (1998). Presented schematically, the value chain can also be used to represent and analyse the matching of demand with supply in a way that adds value and/or maximises profit (Ward and Peppard, 2002).

3.4.9   Coding the observed activities

Conceptualising the internal activities which Shellfish firm F.A. Emery engage in when transforming inputs (raw cockle) into outputs (cooked cockle meat) using value chain analysis was an essential part of organising the data collected. As such, this analysis was a key prerequisite to several research outputs including

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an illustrative analysis of practice and a research poster. Value chain analysis in this instance aided ethnographic coding (Hammersley, 2004) in consideration of reliability (Blaxter et al., 2002). Spradley (1980) explains how using schematic diagrams in this way to identify and organise cultural themes in ethnographic data typifies ethnographic research.

As the fieldwork progressed I was able to distill from my field notes what I had learnt about the working arrangements and practice that depicted my participants day-to-day activities.   Using well-known relevant technical management vocabulary as a means of revising this information, in a systematic analytic but not rigid way (Bryman and Bell, 2003), I then rearranged these processes more expressly into a supply-chain-type construct using the value chain schematic. The result was a diagrammatic representation of cockle harvesting and processing in a linear sequence which helped me understand the shellfish merchants' working arrangements and their practice (Objective 1).

In summary, adhering to an adapted value chain framework allowed me to represent the set of practices embraced by the shellfishery and consider how this work is accomplished. This also served as the domain for the scope of the field study, allowed me to plan more focussed observations and consider more specific ethnographic interview questions (Spradley, 1980).

3.5. Ethics

The proprietors of these micro-enterprises (Cockle Shellfish Merchants) are most unaccustomed to providing written statements confirming their consent to researchers to study them while they work. Whilst it was easy to raise this issue within my institution, finding a resolution to this situation was not straightforward. This is apparently not an atypical ethical dilemma faced by researchers (Pink,

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2012). I did, nevertheless, gain the Leigh on Sea fishermen's verbal informed consent in 2011 when the study began.

This initial permission to conduct this research was granted by the local 'spokesperson' of the Leigh Cockle Fishermen association, in consultation with the Kent and Essex fisheries. This same person was a key informant in this research. The relationship that developed over a period of time was built on honesty, frankness and integrity.

I had worked with my informants as a then unknown, possibly untrusted outsider before re-establishing contact through this particular study. When I did broach the subject of written consent, this time as someone known to the participants, the request was dismissed. Although we regularly spoke about what would make the encounter ethically appropriate, such as asking permission before taking photographs, I sensed that if I had persisted and demanded written consent from my participants at the outset of this project, then it would have undoubtedly been declined. I know this from my previous experience of working with my informants on social qualitative research. Indeed, working with these participants over a prolonged period enabled us to develop a strong relationship, develop robust ethical practices and appreciate the localised situatedness of our ethical concerns (Pink, 2012). In the case of the shellfish merchants for instance, I found that they were accustomed to the attention of heritage hunters and tourists with cameras. This context and the cultural, situated norms encountered framed my ethical practice.

Therefore, having been gradually and informally invited back into their community, to then revert with a request that these informed consents be retrospectively recorded in writing would have jeopardised the special

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relationship that had been fostered, and indeed remained, even after this field study had been concluded. To reiterate my efforts, I discussed written consent with my key informants; the proprietors of F.A. Emery G.W and S.J Dell on two subsequent occasions (2011 again and 2013). These discussions were threatening research progress. I decided under these circumstances to agree to my informants' sentiments not to further seek their written permission, which they felt was unnecessary, indicatively officious, and foreign to their way of doing business. In short, the request was alien to the occupation and culture associated with being a Leigh-on-Sea shellfish merchant. However, to clarify, the study participants fully consented verbally to take part in this research. I regularly kept them well-informed of my progress and intentions. This is the justification for not obtaining written consent.

At all times during this study, I was extremely mindful of the special relationship and the critical importance of not compromising it. Ethical practice remained a proprietary consideration throughout the project: I regularly fed back to key informants on how the data had been used and for what purpose, for example, handing over to participants numerous copies of photographs, sharing and reviewing field data together, providing copies of conference paper abstracts, and presenting a large poster to both my informants and the local Heritage Centre that we had co-created.

Ethical questions I answered in relation to this research project are given below:

Figure 3.6. Ethical assessment

	yes	no	n/a
Will participants' rights, safety, dignity and well-being be actively respected?	/		
Will you describe the main details of the research process to participants in advance, so that they are informed about what to expect?	/		
Will you tell participants that their participation is voluntary?	/		
Will you tell participants that they may withdraw from the research at any time and for any reason?	/		
Will confidentiality be appropriately maintained at all stages of the project, including data collection, storage, analysis and reporting?	/		
Will any highly personal, private or confidential information be sought from participants?		/	
Will participants be involved whose ability to give informed consent may be limited (e.g., children)?		/	
Will the project raise any issues concerning researcher safety?		/	
Are there conflicts of interest caused by the source of funding?			/

3.6 Conclusion

I have used this chapter to describe my ethnographic-historical approach and give my reasons for collecting data using a scheme of qualitative methods. I employed ethnography here in the traditional way of combining participant observation and interview (Pink, 2001). What is more, in selecting an ethnographic approach I was permitted to take advantage of "interviewing opportunities that present[ed] themselves during participant observation" (Spradley, 1980, p. 122).

I predominantly followed (was guided by) Spradley's (1980) conceptualisation of doing ethnographic research not as a linear programme of field work, but as a kind of recurring process of research activity. In this instance I used in-depth observation-interview techniques to gather field data through unrehearsed questioning of participant shellfish merchants using photographs and loosely planned observations. These less-structured methods (Van Maanen, 1982),

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incorporating visual methods, were used as interpretive research tools in collaborative field work with informants to achieve a deepened enquiry and analysis in "search for patterns" in the data (Spradley, 1980, p. 84).

The arrangement of the selected procedures, techniques and instruments described in this chapter represent the scheme of methods I used. The scheme of methods employed included data gathering, unstructured participant observation, ethnographic interview, keeping a diary as a record of participant's experiences, taking photographs and using existing photographs, visual analysis and photo-elicitation, writing and analysis of field notes, coding using a value chain framework, clarifying and validating field notes and writing-up the ethnography. An integral aspect of these research methods was my historical-visual approach. A product of this approach was an additional, complementary narrative with new insights about the characteristics of practitioner involvement in local occupational work and the phenomenon of CoP comprising multiple independent enterprises.

A summation of the relationship between the research aim expressed as research objectives, in connection to the data and the research methods, is tabulated in Figure 3.7.

Figure 3.7 Research objectives in relation to my scheme of methods and information

Research objective	Research methods	Information required
1. To investigate the shellfish merchants' lived experience over an extended period of time, that is several annual fishing seasons (2011-2018), to understand their working arrangements and their practice.	Unobtrusive measures Google Earth images Sketch map Participant observation Ethnographic interview Photography (and archival data) Photo-elicitation Field notes Value chain analysis	Information about the current practices of; searching, dredging, harvesting and processing of cockle. Information about the actors, acts, and action that represent the occupation of shellfish merchants.
2. To analyse from a CoP perspective the social interaction, knowledge sharing and common ties of interest that characterise the occupation of cockle harvesting and processing.	Interpretation of informant accounts on practitioner orientations of participation in practice are used to produce an ethnographic narrative. Combining the essential elements of a CoP, namely mutual engagement, sharing of repertoires and negotiation of a shared enterprise (Wenger, 1998) with an occupational orientation (Salaman, 1974) to conceptualise the Leigh-on-Sea Cockle Fishery.	Information useful for theorising about the dynamics of learning and innovation linked to work which offers the potential to reframe the way in which the phenomenon of CoP is studied. Information which contrasts past and present practice. Information which details events in relation to technological change that traces the modernisation journey of a local fishing community and, information about people's engagement in occupational practice where place of work is an influencing factor.
3. To examine the links between access to resources, practitioner learning and communal capacity for collective action.	Historical-visual analysis of documents Photography and re-photography, photo-elicitation. Past and present traditions/practice are contrasted by interpretating ethnographic narrative about the occupation of being a shellfish fish merchant. Practitioners' relationship to their work (and their geographical relationship), and their community is analysed to help understand how a community of practitioners come together seasonally and experience ongoing modernisation.	Information that examples modernisation in for example, the use of spaces, actors, activities and routines, social relationships, objects/machinery, artefacts and physical buildings, events, time, and achievements and failures achieved/missed etc., in summary, survival and change. Information which could reveal how a local occupational CoP develops the capability to collaborate collectively, improvise and innovate to sustain practice.

Results section (Chapters 4,5 and 6)

The results section of the thesis comprises three chapters, each of which focuses on one of the three research objectives towards achieving the research aim. These three chapters; Making sense of shellfish practice (Chapter 4), Explaining phenomena that characterise shellfish harvesting and processing (Chapter 5) and Insights and perspectives on occupational CoP (Chapter 6) are the culmination of field work from a 7-year immersion in a local shellfish community. The results are the product of observational analysis of the same group of participants over several annual fishing seasons (2011-2018). The significance of the results is that they offer a rich context and an analytical perspective for understanding occupational community relationships and activities.

For the purpose of writing up the results, I include direct verbatim quotations of participants' statements, transcriptions of informant interviews and descriptive statements of informal conversations with participants. In situations where I was unable to obtain the exact quotations, statements are in the form of paraphrased accounts in my own words. In writing about a specific fishery in a specific locale I am making an assertion about the features and characteristics of an occupational community. The results also include reference to documents related to particular observational evidence, such as maps, photographs, archive videotapes, Google images and verbal descriptions of the setting. The visual images included in these chapters are either observational photographs taken by the researcher, or older, found and archival photographs.

Chapter 4 Making sense of shellfish practice

The results in Chapter 4 are essentially a record of what I heard and saw including an analysis of the spatial arrangements at the field location. This record in the

form of an ethnographic analysis in situ constitutes what Van Maanen (1988) describes as an unfinished tale of the shellfish merchant's situation, in particular the observation of their practice, behaviours and artefacts. The significance of the locality, the shellfish merchants' connectedness to their place of work and how this has shaped their community and practice are also discussed in this chapter. The analyses in this chapter (4) pertain specifically to the first objective: To investigate the shellfish merchants' lived experience over an extended period of time, that is several annual fishing seasons (2011-2018), to understand their working arrangements and their practice. Referring back to this objective and selectively drawing from field notes gives me something to say about the experience of being a shellfish merchant. I start by introducing the Leigh-on-Sea Cockle Fishery as a case study.

4.1 Introduction

Commercial dredging for cockles on the scale reported here is believed to be unique to Europe, whilst the sizeable fraction of the industry centred on the Thames Estuary is understood to be the largest and most important in the UK. Wild cockles are gathered either by handpicking them from along the shoreline (as occurred in the tragic Morecambe Bay episode) or, as in this instance dredging estuary beds using specialised coastal fishing boats. There are currently 14 cockle fishing licenses in the Thames. Nine of these shallow draft vessels are based at Leigh-on-sea in Essex, the focus of this investigation. All of these vessels, restricted under licence to the lower estuary, are officially classified as suction dredgers that have been either specially adapted or specially built for cockle fishing. A relatively recent innovation for the Leigh boats has been the use of a solids handling pump system. This new system, which also incorporates a sieve-like mechanism works along much the same lines as before: sifting through

the sand and separating the cockles which are pumped onto the boat but is less aggressive and damages fewer cockles.

From speaking with shellfish merchants, I learnt that each firm regularly employs between 4 and 6 people, inclusive in most cases of the owner operator. The shellfish merchants describe their work as seasonal. All the Leigh based cockle fishermen/processors operate a specialized dredging boat and each boat's *skipper* can process his catch through a bespoke designed, owner-operated processing plant, independent of his fellow *cocklers*. Observations made during the first season (2011) corresponded to my informant's disclosure that speed and yield count for everything in this environment (delay decreases financial return!). Noticeably though, in what has become a very capital-intensive operating environment the objectives of speed never appear to be compromised for quality, which might then impair cockle yield. For instance, whilst observing the cockle cooking process I asked one of participants how long it was going to take them to process their catch. To which the respondent answered:

'*To process this load will take around 4 hours, although (operative sighs) it's the cleaning down and shutting down we have to do that is a drag (hindrance) as this regularly takes a good couple of hours - but we dare not short cut the process…*' (2011 fishing season. Source: informant).

The respondent's acknowledgement here is that timesaving would be a reckless act because non-compliance with food hygiene standards for the sake of getting the job done could forfeit quality. This response is not at all surprising considering the risk to human health from Diarrheic Shellfish Poisoning (DSP) and economic loss from a subsequent shellfishery closure incident. Stories concerning other UK shellfisheries told as failures were extensively recounted in field work contexts.

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Understandably therefore, unfailing attentiveness to quality assurance was presented as vital yet normal behaviour by all participants. Furthermore, this risk averse regime of community behaviour is indicative of a community setting where practitioners appear to have sufficient knowledge of the importance of processing shellfish safely to have learnt that avoidance of contamination is to the mutual benefit of the whole community. The effect is that each individual shellfish merchant gives patronage to work arrangements and behaviours intended to internalise this habitual behaviour. Several other analyses of this community's practice regime which similarly reveal a pattern of risk averse decision behaviour are discussed later in the chapter. These examples also illustrate the preventative nature of shellfish merchant work.

4.2 Leigh-on-Sea Cockle Fishery case study

The history of Leigh on Sea, and specifically the fishermen who characterised *Old Leigh* is well documented (Bride 1992), while library records indicate that shellfish, especially oysters, have been gathered locally since pre-Roman Times. George Dell, who first dredged for cockles in the Thames some 35 years ago and is the owner of FA Emery Fish Merchants, operates one of the larger cockle boats in the current Leigh-on-Sea fleet. George was one of the first participants I worked with during this investigation. I learnt a good deal from my interviews with George and his fellow *cocklers* about the tradition of cockle fishing. My informants willingly shared their knowledge and often seemed to enjoy these encounters as an opportunity to reminisce about the past.

4.3 The modern cockle boat as a resource

George's boat *Sophie Jayne* is most regularly skippered by his son, Steve Dell, who also participated in this research project. As a key informant Steve answered

many informal interview questions during our regular seasonal encounters and as a result, I gained valuable insights about the occupation of commercial shellfish harvesting and processing. I learnt about the heritage of the fishery, the inter-firm patronage of the shellfish merchants (and their rivalries) and, most significantly, I learnt about those matters which are of greatest importance to practitioners who are cockle harvesters and processors. *Sophie Jayne* (photograph 1) was a significant object of observation for this study. Her movements, her quirks, flaws, and the emotions she evoked amongst her crew formed an important part of field study conversations.

Not untypical of vessels in the Thames fleet, *Sophie Jayne* is as big as is legally allowed and has the maximum power permitted. She is 46 foot long (overall, not registered) with a 16foot beam and draws just over 3 foot of water. She has 300 horsepower and a carrying capacity of 1320 baskets of raw cockles, which equates to roughly 30 tones. This is an approximate weight because a load of cockles varies with the time of year when it is caught as does the yield. (The shellfish merchants explain that it seems to be acknowledged by the authorities that approximately 45 Leigh baskets weighs 1 tonne).

Photograph 1. *Sophie Jayne*

From my observations I concluded that technology awareness and adaptation is a central feature of this story about a short sea shellfishing operation. Technology as a theme came up, for example in ethnographic interviews about the increased use of on-board and shore-side machinery. Shellfish merchants recounted how they have almost continually needed to learn new skills in circumstances where routine practice has become redundant through mechanisation. As a result, as with Orr's (1996) field service technicians, shellfish merchant work has become a technical practice requiring minimal manual effort.

In addition to mechanisation of harvesting and processing, merchants also commented on how they have become dependent on technology in their search for cockle. For example, in addition to radar, VHF radio (but more likely mobile telephone), chart plotters and sunlight-viewable displays are all used to reduce a skipper's search time. I also observed on the spot (on-board) experimentation with the use of Global Positioning Systems (GPS) with skippers learning to use

this technology to locate the most dense and accessible cockle beds. When asked about GPS, crews explained that it is used to survey cockle beds at low tide. Skippers programme this survey data into their GPS and thereby improve harvesting productivity. As a thematic point of comparison, these observations corroborate the general uptake and impact of technology on commercial fishing practice recounted earlier in the thesis (Holm, 2001; Johnsen et al. 2009).

4.4 Observational analysis of work practice (2011-2018)

As outlined in the methodology chapter, I adapted the value chain framework in an attempt to visualise the whole process of cockle harvesting (including searching) and processing. The result of this analysis is codified diagrammatically (Figure 4.1) using generic macro processes of transport, materials handling and storage. These were then disaggregated and coded as 17 second-level processes. I categorised five of these 17 second-level processes as d*elay/non-productive* time (a fourth macro-process) to denote connections between all the various observed activity necessary to preserve the functioning of the Leigh cockle fishing community. This construct of the Leigh-on-Sea cockle value chain is a representation of what participants reported in their accounts of what they do each annual fishing season. This preliminary analysis also shows how these processes at every level, are underpinned by the categorisation of recurrent themes which I named 'core competencies. These themes surfaced mostly in relation to observational and ethnographic interview data associated with behavioural factors, such as norms and culture. For example, when asked about catch allowances, the majority of participants acknowledged that their conduct of carrying out routine checks, albeit covertly, was an accepted contingency behaviour for controlling cockle stock. I discuss these themes in more detail in the next chapter.

4.5 Observed activity: Shellfish harvesting and processing (second-level processes)

Figure 4.1 conceptualises in linear fashion the disaggregated activities of harvesting and processing cockle. For example, steps 1-3 involve an outbound trip to search, dredge (harvest), and load cockle. Steps 8-13 involve more continuous process-type work involving automation. Stages 1-5 take place at sea (short sea trips in and around the Thames estuary). Stages 6-15 involve operational land-based work required to yield a commercial return on the cockle catch. For stage 16 there was no activity to observe, while stage 17 involves contracted labour and is outside the scope of this study.

Figure 4.1 Coding of field data using a value chain analysis (Source: author)

Value Chain Analysis

	Transport	Materials Handling	Delay/non-productive	Storage
1. Transport (outbound)	•			
2. Search and find cockles			•	
3. Dredge		•		
4. Waiting for flood tide			•	
5. Transport (inbound)	•			
6. Mooring			•	
7. Gather & discharge catch		•		
8. Transport (to processing plant)	•			
9. Process set up			•	
10. Load into hopper		•		
11. Transfer to conveyor	•			
12. Clean		•		
13. Cook and Cool		•		
14. Refrigeration				•
15. Close-down			•	
16. Sell		•		
17. Outbound distribution	•			

(Items 8–13 bracketed as "Continuous")

CORE COMPETENCIES:
Contingency Management
Quality Assurance
Technology Management
Coordination

Yield

Stephen P Hickman

As can be seen from Figure 4.1, the value chain analysis provided a basis for understanding what the shellfish merchants actually do. In this respect the model was an essential tool for diagramming the sequence of work routinely undertaken by Leigh-on-Sea cockle merchants in an easy-to-understand way. Thus, the value chain framework was the research tool and the value chain analysis the research result. However, beyond this conceptual classification of the routines and core competencies, the value chain analysis results do not, and were never intended to, reveal much about the social nature of the merchants' work arrangements or their relationships with the institutions of which they are a part. I come to this later in the thesis. In the next section I focus on each of the major sub-stages of harvesting and processing cockle based on the sequence set out in Figure 4.1.

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4.6   Shellfish harvesting and processing

In this section cumulative written-up field notes from the observational analysis represent the stages participants go through to complete routine harvesting and processing work.

4.6.1 Stages 1-3 Transport (outbound), Search and find cockles, Dredge.

An average trip from their base in Leigh-on-Sea to the inner tidal reaches of the Thames estuary is about an eight- or 10-mile round trip. However, the crew may sometimes cover up to 15 to 20 miles in a single round trip. The total return trip mileage to the extra cockle beds will always vary and will depend obviously on workboat finishes working. On a typical outward journey the first 1/3 of a mile is slow progress for an unladen cockle boat. Progress is slow because each outbound journey involves the same uncertainty because the silted creek has made navigation work precarious. I routinely observed first-hand skippers carefully negotiating a low tide watercourse along the creek in an eastward direction towards the estuary. I learned that this part of journey, because of a skipper's fear of running aground, required a good deal of concentration and skill. As an outsider I also learnt that asking a skipper for information whilst they endeavor to monitor and control the movement of their vessel during this tricky part of the outbound journey is improper; '*don't distract him, we'll end up on the wrong side of the marker buoys*' (2012 fishing season. Source: informant).

Once away from the creek and into the estuary, the cockle vessel will head to one of designated harvesting management areas (cockle beds). In this regard GPS is now an indispensable tool on any cockle vessel. This technology allows a skipper to plan and program each day's catch zone. With more targeted searching for cockle and onboard hydraulic suction dredging equipment (first

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introduced in the 1970's) now established as the main method for harvesting, the whole search and catch process is considerably more efficient. As an illustration, for traditional hand raking, to make the operation economically viable an operative would need to achieve a density of greater than 30 cockles per square foot, whereas the hydraulic dredge method only becomes uneconomic when the density falls below 10 cockles per square foot (2012 fishing season. Source: informant)

Photograph 2. Hydraulic suction dredge deployed for harvesting

Once a bed of cockle has been located, the skipper will deploy the hydraulic suction dredge. The dredge has two functions: first it washes cockles out of the sand and then it lifts, or suctions, larger cockles from intertidal beds on the sea floor (Pickett, 1973). *Sophie Jayne's* skipper explained how it is possible to regulate a boat's speed and control the water pressure squeezed down the dredge pipe. This was given to be the most effective harvesting technique (2012 fishing season. Source: informant). Away from the field I reflected on how this expertise could only be acquired through many years of being a Leigh-on-Sea cockle boat skipper.

4.6.2 Stages 4-11 including transport (inbound), mooring, gather and discharge of catch, load into the hopper and transfer to conveyor

For the inbound journey the skipper's objective, boat-laden with his Total Allowable Catch (TAC) of 500 baskets of raw cockles (measured by the

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authorities as 13.5 cubic meters), is to return to Leigh-on-Sea beach in the shortest possible time. There is always some light maintenance to carry out enroute, for instance flushing clean the dredging equipment (photograph 3). This work is undertaken by the crew operatives as soon as the vessel begins to gather speed. Then, once the dredge is secured, inbound transit is very much a race against time to attain the highest yield from the freshest cockles as attested by the shellfish merchants; '*we get better yield because of the minimal time between catching and processing*' (2012 fishing season. Source: informant). Vessels will achieve an average speed of 8 knots on the return journey on an incoming tide.

Photograph 3. *Sophie Jayne* flushing her dredging gear.

It is during the return journey when attention must also be given to maintenance of the riddle. Maintenance includes removing and returning cockles lodged in the riddle in operational readiness for the next trip.

The details of how the riddle ensures all juvenile, undersize cockles are returned to the sea helped me make sense of regulative aspects of cockle fishery

management policy. Orders regulating the fishery stipulate that the minimum legal landing size of cockle is 16mm. *Sophie Jayne's* crew explained how this piece of equipment is modified so that only riddled cockles above the minimum size are harvested, thus ensuring compliance which helps to safeguard cockle stocks.

Photograph 4. Arrival of the new riddle

At the start of the 2015 season, I was involved in a tea-break gathering at the sheds to celebrate the arrival of the new riddle (Photograph 4). I observed how this new riddle system stimulated everyone's excitement in anticipation of a new fishing season. By everyone, I mean both *Sophie Jayne's* crew and that of curious

adjacent shellfish merchants. However, rather than speculating on what fueled the interest of neighboring competitors, I turn instead to an instance of unsought new equipment being less well received.

In contrast to this episode in 2015, there was an occasion when I encountered an informant (in the cabin of their cockle boat) trying to make sense of a new computer system for recording daily cockle catch. This system, I was told, was unlikely to succeed. It would fail because although it was designed to record cockle there was no data-entry field designated to this type of shellfish. Versions of this story, all associated with "*bureaucrats*" introducing a "*stupid*" monitoring system as a "*waste of time*" were re-told during the 2014 fishing season. (2014 fishing season. Source: informants).

Re-reading my field notes, I reflected on how my participants, protesting more than mildly, dealt with this challenge. There was, understandably, some resistance to implementing a complicated system which did not seem to meet their specific needs. I discerned merriment amongst some shellfish merchants when they recited their improvised workarounds to this monitoring system. In short, what they regarded as an imposed change in practice, had created an opportunity for participants to express the troubles that they, from the community perspective, have to deal with as part of being in the occupation of a cockle fisherman. This seemed to be their way of making sense of a situation that initially made no sense to them.

Another significant modernisation factor which has altered commercial fishing practice is communication technology. On another day I observed how advances in ship-to-shore connectivity using mobile phones, in contrast to computer

monitoring of cockle catch, appear to have been welcomed by the cockle merchants and transformational for their practice.

Throughout the return journey the skipper will maintain regular contact with the onshore shed crew by using a mobile telephone. Sharing information about the vessel's progress, or lack of it, seems to help ensure that no activity takes place in the system of work until there is a need for it, facilitating a type of the just-in-time (JIT) procedure. The preparatory work of the shed crew is thus directed by the skipper from the incoming cockle boat. In advance of unloading and the trans-shipment of cockle, and the timely set up of the processing plant shed crews, under the skipper's instructions, shed crews routinely complete and coordinate berthing activity ready for mooring the cockle boat. I observed the reoccurrence of this practice amongst all shellfish merchant crews during my time at the field site.

The dilemma for the shore-based operatives is to not start the plant to run too early, which would be wasteful of resource and impair cost efficiencies, but equally, as my informants explained, not to oblige the skipper to spend his own time maneuvering the excavators and/or tipper trailers into position on arrival at the berth, nor to cause disruptions or stoppages because the processing plant is not as it should be to satisfactorily process the catch. This was the first noticeable example of what I interpreted as participants involved in coordinated action.

This, however, was not the only example of coordination I witnessed, as observing an incoming convoy of cockle boats also revealed instances of shellfish merchants achieving more together than they could alone. I captured one of these particular instances on camera (Photograph 5).

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Delayed by low water tide, cockle-laden vessels were seen forming orderly queues at the approach of the creek. Each skipper's place in the waiting convoy is determined, not by his time of arrival but by his consigned place of mooring. In speaking of easing congestion in the creek, my informant explained how it was accepted practice for skippers to take their place in a type of prearranged convoy. I observed this customary ritual on several occasions over the seasons and was always perplexed (most likely because of my management experience) by how, in the context of competitive rivalry, these cockle boat skippers managed highly effective coordination without a designated coordinator. Such posture of cooperative behaviour was not something I was expecting to find.

Photograph 5. An incoming convoy of cockle boats.

4.7 Mooring

Skippers will always turnaround a boat in the creek before mooring, so as not to impede the next incoming tide's sailing. But this is the only acceptable delay that is permitted as the time between landing and cooking each catch is crucial,

particularly in summer. In theory, the proximity of the cockle beds as a source of the raw material that has allowed the cockle fishermen to keep operations in their backyard is possibly the primary factor behind the original decision to locate the factories in Leigh. However, things have changed, and being situated in Leigh today is in actual fact more of a hindrance. This is contextualised by what one respondent had to say when engaging with a photograph (photo elicitation) during an ethnographic interview.

"*Leigh creek is tidal and the lack of water for long periods means delay in processing. It also restricts our working times. The location of the cockle industry in Leigh is purely because it has always been there. If anyone were to start from scratch Leigh, as it is today would be the last place to work from!*" (2015 fishing season. Source; informant).

Photograph 6. Berthing in Leigh creek (Renown is a competitor cockle boat).

"Leigh, as it is today would be the last place to work from"

In times past all boats would moor directly behind their processing plants, but as a consequence of the creek silting up some fishermen, have been forced to re-

site their moorings further along the beach where there is deeper water. I learnt that this strategic response was designed to overcome any vessel bottlenecks in the creek. The details of how participants dealt with this situation are discussed in chapter 5.

4.8   Gather & discharge catch

Essentially, there were two accepted best practices for unloading cockles on Leigh beach that I observed. Both of the current methods of unloading have evolved to suit the individual situations of the Cockle fishermen. Whenever a skipper is able to moor close to the rear of his factory he is more likely to use an excavator to dexterously grab hold of the loose cockles from the boats hold and discharge a full grab into a front shovel loader. The alternative method is to discharge the hydraulic grab directly into a tipper trailer (photograph 6). With either method, which is anything but a simple, unskilled materials handling process, the raw cockles only need to be handled once.

The cockles are either tipped directly into the hopper or unloaded onto a conveyor belt. The successful adapted use of heavy hydraulic plant, more usually used for uploading aggregate into trucks or clearing rubble, is a striking example of the cockle merchant's improvisation. Their inventiveness illustrates how they have learnt to adapt to their changing operating environment and, as result, have abandoned more manual tasks. Discovering this physical connection between plant equipment and practice led me to conclude that this was characteristic of my participants' routine acquaintance with their community's ongoing modernisation journey. These conditions suggest that there is nothing much at all in shellfishery working arrangements or practice which is permanent.

Photograph 7. Hydraulic grab unloading cockle into a tipper trailer

4.9   Transport to processing plant

Despite the need to re-site some of the moorings further away from the factories, the operating zone remains highly optimised. The beach zone has to accommodate multiple short journey vehicle movements, most of which are no greater in distance than 15 to 30 metres. Short round-trip movements from the discharging vessels to the processing plants across this space will typically involve multi-skilled shed crew operatives moving around plant and equipment such as loaders, or manoeuvring tractors pulling tipper trailers into position to feed their individual processing plant. At the height of the season the beach area between the moorings and the sheds can be a very busy space.

When observing unloading activities in these conditions it becomes instantly noticeable that the cockle fishermen run a well-orchestrated, highly optimised off-road logistics operation on the foreshore at Leigh. However, this is not because

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of any operating space governance. There is no central transport controller or watchful manager efficiently directing operatives who constantly need to crisscross each other's paths in the beach zone. Neither is there an imposition of mandatory signage, or obstructions to direct vehicle manoeuvres. These enterprises operate in unison by achieving what appears yet again to be highly effective cooperation. The cooperation manifests itself as confidence-based action, whereby participants display a comprehensive grasp of what is required from them at a particular moment in time. This aspect of coherence is possibly the most interesting in terms of coordinated effort, collective know-how and community coherence. I sensed that the whole community knew about, and tried to comply with, a set of soft laws (behavioural norms) required to preserve order during transhipment activity throughout the fishing season.

4.10   Load into hopper and transfer to conveyor

Each factory hopper will hold an entire catch. The cockles are always fed into the plant via a conveyor belt, either from a hopper or front shovel loader. When the freshly gathered cockles are loaded into the hopper they will remain tightly closed as they fall through to the belt conveyor feeding directly into the cleaning process. Additional field photographs depicting this part of the process are presented in the methodology chapter (Figure 3.4: Cockle poster).

Cockles must be cooked whilst still alive or the meat does not separate from the shell. Cockles that remain closed during cooking will not return any yield and are discarded with the shell. On a hot day loss of yield from a catch can be as high as 25%.

4.11   Continuous processing - cleaning

The first stage of preparing the cockles for cooking involves mechanically shaking the raw cockles through a rotating screen or cage to remove surface mud or sand. The raw cockles then fall into a tank of boiling water. Nothing is left to chance, and the physical segregation of the raw cockles during the first stage of cleaning before the cockles enter the factory's *high care* area for cooking, successive cleanings and ultimately cooling off the finished product demonstrates diligent quality control and assurance measures. The bespoke-designed machinery imbedded with computing technology is highly specified and has completely eliminated the need for human intervention in the *high care* area operation. Automation on this scale relative to the size of these micro-businesses has brought considerable advantages, both in terms of reduced cost and time as well as consistent quality. I noticed a high degree of repetitive processing, with material handling equipment designed to minimise manual labour. Each processing factory is set up to achieve a smooth and fast flow of cockles, which means this whole process from start to finish consumes about four hours per catch.

4.12 Continuous processing - cook and cool

The cockles travel through a boiling tank on a metal conveyor submerged in water at a minimum temperature of 94 degrees C. The cockles must be no more than 4" thick on the conveyor so that the heat penetrates to the centre of the load.

One of the participants expressed it this way:

"*The cockle depth is regulated by means of a fixed sized opening at the start of the conveyor. The reason for the automation is that the cockle meat has to be held at 94 degrees for a predetermined (computer controlled and monitored) time*
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in order to kill all bacteria. The conveyor, a type of continuous chain broiler, is geared to be at a constant speed and is not adjustable! After about 4.5 meters the boiling water drains off and the cockles are again agitated in another metal cage before falling to a lower-level trough of ice-cold water". (2012 fishing season. Source: informant).

Photograph 8. Continuous chain broiler

This is one of several water transfers I observed on a single batch of cockle. I learnt that transferring the cooked cockle meat into clean fresh water enables cooling and continuous washing through the high-care area. The cockle fishermen recounted that their decision to implement computer-aided manufacturing technology as a means of automating and quality controlling the process is probably the single most contributory factor to the survival of the Leigh network. (2012 fishing season. Source: informants).

Photograph 9. Cooling and continuous washing of cockle.

I was able to validate data collected through participant observation and ethnographic interview by reviewing hard copy prints of these photographs in photo-elicitation interviews. The analysis confirms six key stages: namely, dredge (harvest cockle catch), return journey to shore, discharge cockle-catch, transfer load to hopper and, cook and cool cockle meat.

Also, as an accompanying visual narrative to the value chain analysis, the photographs reveal aspects of practice which the textual data fails to illustrate. More specifically photograph 2 for example (Hydraulic suction dredge deployed for harvesting), depicts the cockle boat (*Sophie Jayne*) in circular motion as indicated by the trailing wash. The vessel is manoeuvring in a circle because it has successfully located a batch of cockle. In a photo elicitation interview several days after this trip I discerned from my respondent (the skipper) that he had been paying particular attention to the vessel's position and, in his words, "trying to hold the *shram*" whilst the dredge was in operation. I was later to learn that the term *shram* has multiple meanings in relation to cockle. In this context shram

designates a bed of raw cockle on the seabed. *Sophie Jayne* was therefore "on the shram". (2012 fishing season. Source: informant).

Contrasting photograph 2 with photograph 4 and looking closely at the riddle (old and new respectively) demonstrates how the shellfish merchants insert plastic sleeves around every other riddle spindle to control the minimum legal landing size of cockle to conform to the regulations. As with the use of plant machinery modified for unloading cockle, this is another example of improvisation.

Before delving into the shellfishery location and geographic proximity as factors affecting shellfish practice and relationships, I will finish the analysis of work arrangements by considering the results of a photo-elicitation interview associated with the harvesting activity. These particular findings revealed in photograph 10 did not immediately become apparent to me.

Photograph 10. Levelling off harvested cockle

There are two interesting aspects to note in this photograph: one is a technological innovation, the other a form of monitoring and control. The technological innovation is the rubber shovel depicted in the photograph. My informant told me the story behind the rubber shovel in a photo-elicitation interview.

Initially, as I was told, cockle boat crews used metal shovels to level off the catch up to the white line indicated in the photograph, but the heavy shovel always damaged (crushed) a portion of the catch. The rubber shovels were successfully introduced in an attempt to reduce cockle shell damage.

There was a follow-on casual conversation at the sheds when catch limits were being discussed. On this occasion I was told by one informant that whilst this innovation, now widely used at Leigh, had reduced cockle shell crush rates and thus improved yield, crush rates did still inevitably climb in the busiest weeks of the season. This is because primarily, according to one individual fisherman, crews tend to employ casual labour during the height of the season and casual workers are heavy-handed with shovels (2012 fishing season. Source: informant).

The second specific point of interest in photograph 10, useful to an understanding of local protocol, relates to observed behaviour associated with monitoring and controlling Total Allowable Catch (TAC). The white line featured in picture 10 is the cockle boat skipper's impression of an overload protection system. As such, the calibrated white line on the vessel's hold relates to the regulated, 3-day quota set each season to stop overfishing of cockle stock. The calibrated line designates the TAC to be carried on a trip. A load, as mentioned earlier, is

approximately 30 tones. These more stringent catch limits, introduced relatively recently, influence many everyday shellfish harvesting decisions each season.

One such activity in this respect is the practice of *levelling off* a load. The practice of levelling off each harvested load before reaching shore evolved as shellfish merchants became increasingly attentive to optimising their week's TACs. It was important, my informants explained, to always be on the white line, but never over the line (2015 fishing season. Source: informant).

Returning (briefly) to the mooring process discussed earlier, I now address the somewhat covert practice of checking that a competitor boat's catch is not over the white TAC line; a practice observed on several occasions during my seasons in the field. These more salient observations revealed a deliberate action by shellfish merchants to stakeout a competitor cockle boat before a crew commences offloading. What was, to me, a somewhat covert, quasi-inspection, practice of checking that a competitor's catch is not over the white TAC line was, in the eyes of my participants, normalised behaviour.

Glancing at a competitor's cockle catch is an activity which, from the perspective of an outsider, was difficult to understand independent of the context. What I mean is, the business of superintending a moored competitor boat in this way seemed, to me at least, to be rather at odds with the notion of a community engaged in similar activities and thus, entwined in implicit close relationships and daily interactions. This particular observed behaviour, which contradicted my general interpretation of what appeared to be a strong occupational bond enjoyed by a localised version of a CoP, raises some intriguing questions regarding the distinction between confidence and trust. One possible explanation could be that I had observed participants using the presence of distrust in their community as

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the logic for performing the action of surveillance. I concluded that the shellfish merchants have learnt not to trust each other.

Another possible explanation for this contradictory finding could be that whilst participants displayed confidence in one another's occupational competence, confidence within this community is not based on the belief that a competitor shellfish merchant is necessarily trustworthy. It is possible, therefore, that the existence of apparent distrust between practitioners is a relatively less important factor than confidence in relation to practice.

In any event, I learnt that this system of scrutiny, whereby one fisherman doubts another's TCA compliance, was accepted as an important factor in the sustainability of the fishery. Moreover, in this quasi-inspectorate role, shellfish merchants provided a mutually beneficial form of self-governance, or soft law. For although the Inshore Fisheries and Conservation Authority (IFCA) conducts random unauthorised checks, the more effective monitoring appears to be the shellfish merchants' own regular and routine self-governance system. I concluded that, in procedural terms, the shellfish merchants habitually participate in this integral system because, as practitioners, they collectively understand the mutual benefit.

4.13 Location of the field site

So far in this chapter I have described shellfish merchant activity and work arrangements strictly in terms of practice. These findings reveal how the shellfish merchants, who are collectively engaged in a similar enterprise to harvest and process cockle, share the same work situation. However, to better understand the way that these people's occupational lives are interwoven with their place of work, I will use this final section to speak about the physical location, the changing

typography of the field site and the space, namely the locality, shared by the Leigh-on-Sea cocklers.

A clustering of independent but inter-dependent cockle fishermen with their boats, their plant, equipment, workshops and processing factories in one place, along a single stretch of a heavily silted creek on the Thames is more a legacy of constraint than a rationalised location decision. The problem of operating out of a tidal silted creek is a message repeated by all the Leigh cocklers. Some of the measures taken by this particular community of micro-businesses to mitigate against the fact that the location is less than ideal, combined with their effective management of the foreshore (an operating zone that covers no more than the size of a football pitch, yet houses no less than eight processing factories, 7 moorings, maintenance workshops, and a retail outlet) are all features that made this a fascinating study of off-road logistics in this quite unique intertidal coastal zone. As explained in the methodology chapter, part of the analysis involved the development of a field study location sketch map. The map (Figure 4.2), derived from field notes and conversations with informants, depicts the physical coastal space that comprises Leigh Creek, the beach operating zone and the processing factories. The heritage of the cockle industry in Leigh has inscribed this place on the (local) landscape (Herbert 2000) as *Cockle Row*. This coastal space or foreshore which, because it stands (adjacent to salt marshes) relatively isolated from the majority of all other local businesses and residencies, has noticeably developed a high level of operating autonomy. For example, the cockle merchants have relative freedom to process at any time of day without causing any major environmental noise nuisance.

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Figure 4.2 Sketch map of field location at Leigh-on-sea (Source: author)
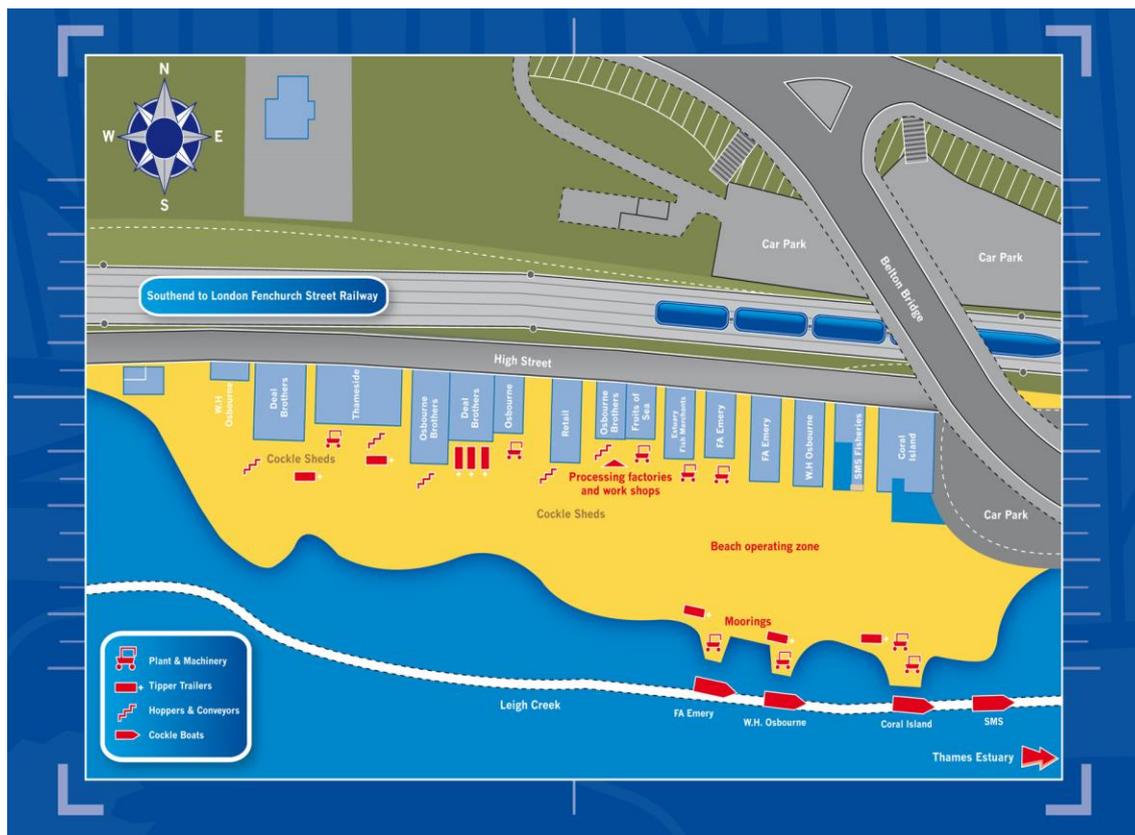
4.14 Locality and topography

The sketch map was invaluable as an instrument for conducting investigations and sharing viewpoints throughout the research process. What is more, this map itself was an observational step forward as I tried to become more reflexive about my research. For example, in the course of my research, I often referred to the sketch map when reflecting on my fieldwork encounters to consider how, for instance, I had familiarised myself with this space, responded to the presence of others sharing this space, observed my participants in their work situation and noticed what initially appeared to be the material peculiarities abandoned in and around the cockle sheds. In addition, the map draws attention to the reality of the

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shellfish merchants' work environment wherein they worked in such close proximity to one another.

As I took different routes through the labyrinth of cockle sheds and explored trails surrounding the foreshore and cockle boat berths, I began to sense how this landscape had changed and appeared to be ever-changing. Also, discussing and developing this map with informants, I began to appreciate how the shellfish merchants' lives were interwoven with their place of work. In short, the sketch map offers a visual perspective on the locale as a space upon which, in one way or another, the majority of the doing, thinking and talking cockle work happens (Ingold and Vergunst, 2008); the exact place where observed events took place.

Moreover, as I explain next, triangulating the sketch map data with two Google Earth images illustrated the changing typography at the field site. This changing typography was contrasted in two aerial photographs (2006 and 2017) to help me understand the significance of the place in relation to current practice and past events.

The analysis of an image of the field location prior to the study (Figure 4.3) anchors the ethnographic field work, denoting a visual baseline (Harper, 2012). The second image, circa 2017 (Figure 4.4) is from the latter stages of the study.

Figure 4.3

Field location prior to study circa 2006

Figure 4.4

Field location 2017
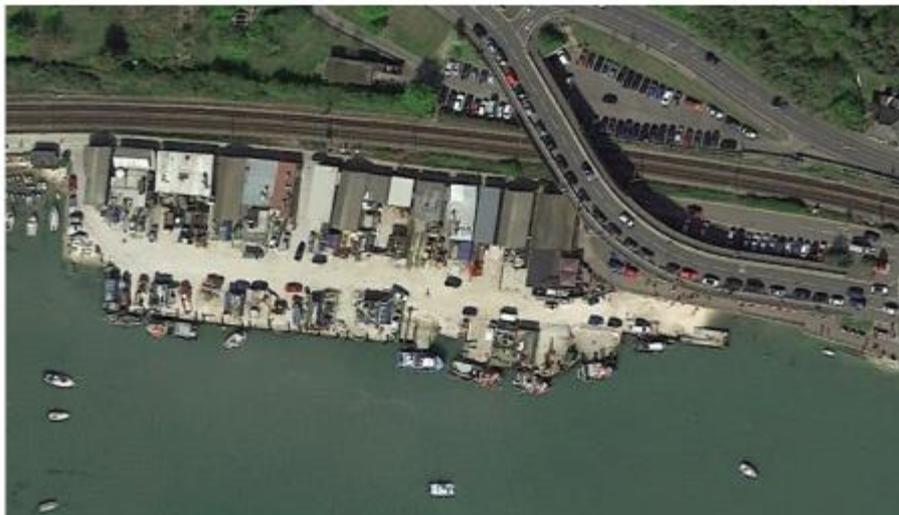
When scrutinised, the 2017 image versus the earlier image shows the extent of

shellfishery infrastructure development during the study period. The development

outward along a strip of the shoreline, for example, clearly shows the installation of new jetty structures with a proliferation of structure and machinery.

These contrasting perspectives illustrate the changing relationship between the setting, the physical infrastructure and the land-based activity which occurred within the fishery during the study. Contrasted in this way, these images reveal the ever-changing topography of the field site and the geographical proximity of the Leigh-on-Sea shellfishery within this space at different points of time. When I juxtaposed one Google Earth with the other it allowed me to gain an awareness of the spatial change that had affected the shellfish merchants' work situation.

Although these images provide only clues as to the human experience of working in the vicinity, they do, nonetheless, evoke a sense of place. That is, the images illuminate a localised version of a modernisation journey. Put another way, the shellfishery, seen through these Google images is reduced to a silhouette of shapes, highlighting both additional infrastructure behind the cockle sheds and a new linear arrangement of facilities and equipment overlaying the natural tide line of the creek in the 2017 image.

The development on the foreshore to the rear of the cockle sheds (in the 2017 image) is all the more interesting because the jetty constructions occupy what is essentially a public space and intrude directly into the creek. Furthermore, I learnt that the foreshore development had avoided planning permission in what was a swift and collective acquisition by the shellfish merchants; a finding which is not difficult to interpret. The developments were mandated and marshalled by the shellfish merchants as a collective, apparently independent of the local unitary authority who owned the foreshore.

Evidence gathered during photo elicitation interviews with participants confirmed that the shellfish merchants, determined to optimise their operation, took what feels like an audacious decision to extend themselves along and into the creek autonomously (2016 fishing season. Source: informant). However, I understand that the development work, which changed the shellfishery's size and locality quite considerably, was completed under the watchful gaze of local authority.

4.15 Summarising these results

The aerial view summarises the change and modernisation at different points of time, while the observational analysis at eye-level is an attempt to interpret routine work practice involved in the practice of shellfish harvesting and processing. In respect to shellfish merchant participation in occupational practice, the results from observational field data are much more revealing. A descriptive observational account supported by an interpretative explanatory account of ethnographic interview data helps to establish the stages of cockle harvesting and production. These results, in the form of an augmented review of field data and a diagrammatic representation of the sequence of shellfish merchant practice make explicit the rules, norms and routines underpinning what appears to be increasingly automated, technical and complex interdependent occupational work.

What is more, because the aerial data yielded new insights. I discovered associations between physical factors, working arrangements and practice. By contrasting this aerial view with observational data, I have been able to gain an appreciation of how the shellfishery (the place) is spatially connected to the spaces and the community of practitioners operating within it. Seeing the shellfishery from a different vantage point offered a perspective on the

relationship between the setting, the physical infrastructure and the land-based activity. This offered a new way to interpret observational data about shellfish merchant working arrangements and practice.

Chapter 5 Explaining phenomena that characterise shellfish harvesting and processing

5.1 Introduction

This chapter is a conceptualisation of observed practice linked to my informants' actions and behaviour. The discussion is organised around the practice and occupational setting examined in the previous chapter. However, beside continuing to report what I found, I also attempt to develop connections to theory as I examine the social structure created to keep the Leigh-on-Sea shellfish community together. I do this by linking the analysis and interpretation of my field notes to theoretical features which have a noticeable association with the selected works discussed in the literature review. My synthesis, however, extends beyond the best-known elements of CoP theory to incorporate essential assumptions and characteristics of occupational communities. The appeal of going beyond theory verification (Smith, Hayes and Shea, 2017) helps mitigate the risk of only repeating findings and perspectives offered in the CoP literature. Consequently, the results in this chapter provide some support for the conceptual idea of Occupational Communities of Practice (OCoP).

In order to gain new insights, I searched for clues to explain various emergent themes that characterised the situation encountered in the field. To draw some interpretation of the results I reworked my fieldnotes to develop an understanding of shellfish harvesting and processing as conceived in the minds of my informants.

Fundamentally, the findings presented in this chapter relate specifically to research objective 2: to analyse from a CoP perspective the social interaction, knowledge sharing and common ties of interest that characterise the occupation

of cockle harvesting and processing. Allied to this objective is the discovery of a cultural scene which represents seeing and hearing the social drama of shellfish harvesting and processing unfold in my presence. The chapter is, thus, a representation of the frequently recurring activities in the form of key themes abstracted from field notes and photographs.

5.2 Drawing links between CoP and occupational communities to characterise shellfish merchant practice

As highlighted in the literature review, CoP can be best understood as a part of understanding the occupational context. The important conclusion drawn from the literature review was that linking CoP with occupational communities could provide a theoretically informed approach to interpreting field data. This gave me the idea of drawing on these associations to develop a consolidated analytical frame in order to gain insights into the phenomena that characterise shellfish merchant practice.

To this end I used selected conceptual overlaps (referred too in the literature review as conceptual coherence) to draw attention to noticeable phenomena that interested me most in the observational analysis and informal ethnographic interviews. A schematic of the analytical framework I developed is presented in Figure 5.1. Before proceeding with my characterisation of shellfish merchant practice however, it is important to outline the relationship between the theoretical features in Figure 5.1 to selected works discussed in the literature review.

By actively combining two already-known concepts, I show how I structured my thinking and selected possible themes which could help to explain the phenomena under investigation. The result in Figure 5.1 is an expression which clarifies areas of close affinity between Salaman's (1974) conceptualisation of

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occupational communities and Wenger's (1998) theoretical perspective on CoP as they relate to my results.

Figure 5.1 Merging Salaman's (1974) conceptualisation of occupational communities and Wenger's (1998) CoP
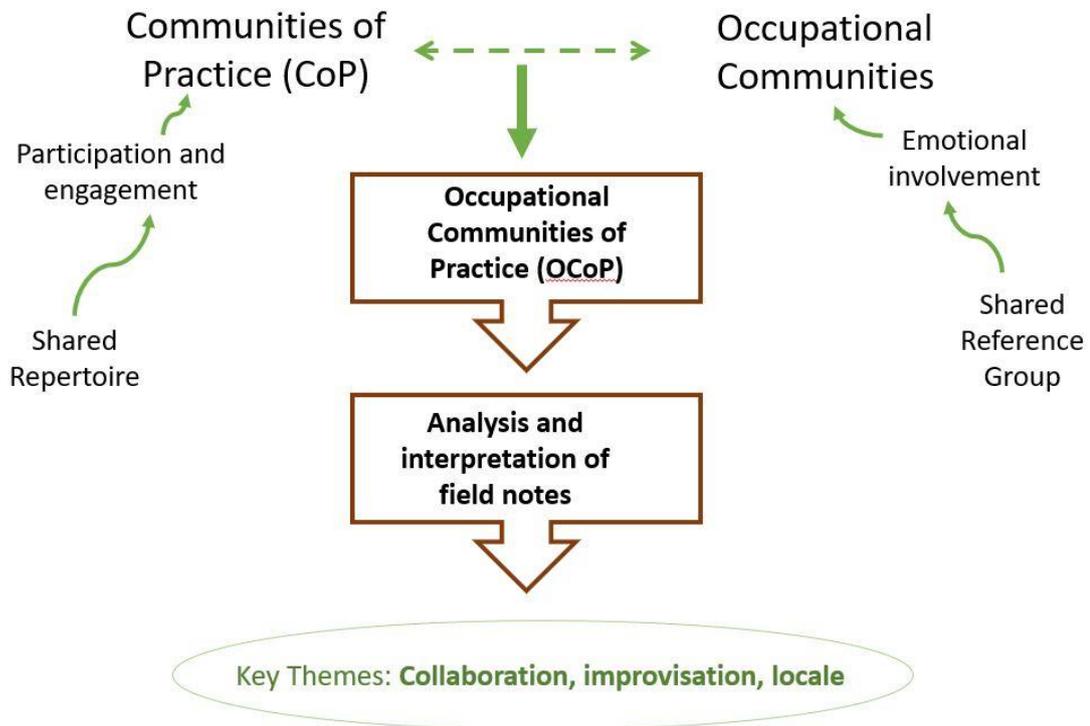
The diagrammatic representation in Figure 5.1 is, in part, two sides of the same coin. Essentially, this portrayal is an iterative synthesis of several similarities identified in the literature review. Although, as pointed out already, most existing research on CoP refers to Wegner's (1998) organisational-minded perspective. In contrast, not unlike Salaman (1974), the observations in this thesis concern communities, practice, and practitioners oriented appreciably to their occupation.

Given that the structure of the organisation is not the primary concern here, it is, therefore, the broader occupational context which justifies my decision to use a consolidated construct: namely, Occupational Communities of Practice (OCoP). This framework seemed more compatible with a research context that demanded

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a novel approach and an occupational narrative. In packaging this narrative together, I attempt to avoid the temptation to overuse domain-specific theoretical terms and concepts.

The left side of Figure 5.1 draws from aspects of CoP. The right-hand side depicts what I considered salient elements of Salaman's (1974) interest in occupational communities. The key CoP elements underpinning this conceptualisation are shared repertoire, participation, and engagement, whilst second level concepts, such as shared reference group and emotional involvement, further emphasise features which Salaman (1974), and Van Maanen and Barley (1982), deem to typify an occupational community.

In the first of my results chapters (Chapter 4) I included a preliminary analysis of recurrent themes which I named 'core competencies'. I now use this chapter to link the preliminary analysis to major themes related to behavioural factors which emphasise participation and involvement in practice. As indicated in Figure 5.1, the themes from the data that came to my attention were explicitly, collaboration, improvisation and locale.

5.3 Emotional involvement in practice

As previously stated, Wenger's theory that participation and engagement yield meaningfulness are akin to Salaman (1974) arguing the significance of occupational communities developing a positive attitude towards their practice so as to stimulate involvement in workplace activity. To recap, Salaman (1974) asserts that the level of emotional involvement attached to an activity characterises a practitioner's attitude towards their occupational work. Wenger (1998), on the other hand, makes no apparent connection between emotion as a factor which can arouse involvement in practice. For instance, although Wenger's

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(1998) CoP signifies coherence to be the commanding conception of CoP determinants, very little if anything is made of emotion as a factor which could bond and closely knit together a community. However, in this study, the dimension of emotional involvement was a key inspiration in my interpretation of factors that my participants used to attach importance and value to their occupations. Taking the factor of emotional involvement into account was thus useful in understanding how the shellfish merchants conceived certain practice to be meaningful work. I did not foresee, however, the extent to which this community of practitioners were emotionally involved in their occupational work.

5.4 Evidence of emotional involvement in practice

During my time in the field, I heard numerous casual conversations and observed several instances of participants emotionally involving themselves in their work. I discovered two levels of emotional involvement in the data: one individual and the second collective. That is to say I observed individuals, deep-rooted in learning skills and exchanging knowledge whilst striving to maintain their identity and extend their influence as a valued member of their community. Also, in view of the fact that I was often observing groups of participants, as recounted in Chapter 4, I also discovered activity which positively affected collective engagement in practice.

An example of an individual displaying emotional involvement is my observation story about an informant, in a less than receptive mood, learning how to implement a new catch-monitoring system for his cockle business. Another example to quote would be the occasion when I encountered a skipper and his crew, trialling the use of a Global Positioning System (GPS). I deduced that both of these task-related examples (reported in Chapter 4) which, not for the first time

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confirmed the technical nature of the observed work, illustrated a high level of job involvement. A comparable finding was reported by Salaman (1974), who also found that the application of knowledge in a technical work context can stimulate emotional involvement. My data similarly shows that, due to the technical nature of the observed work, requisite knowledge is a vital part of shellfish merchant practice and identity. Moreover, season after season I witnessed an ongoing demand within the shellfishery to do things in a modern way. The presence of an occupational dynamic to use, be knowledgeable about and be recognised for, appropriate mechanical and technological practice was, in my interpretation, an implicit influential source of emotional involvement in shellfish harvesting and processing.

In view of the fact that I was often observing groups of participants, again as recounted in Chapter 4, there is some selective interpretation of activity which positively affected a group's engagement in practice. For example, I listened to participants' everyday conversations about attaining optimum harvesting performance by ensuring the dredge persistently stays over the targeted cockle bed (*shram*). I also became aware of their consistent alertness of procedural norms, such as the esoteric exactitude of attaining the required penetrative heat for cooking raw cockle. All of these are indicative features of highly skilled occupational practice and, thus, factors which can stimulate emotional involvement.

5.5 Learning from others in OCoP

 For the most part, I found participants were absorbed in their work. I concluded that it was this engagement in work-related activity which motivated the participants to initiate conversations about the modernisation of practice with

other shellfish merchants. I determined that this ebb and flow of social discourse about modernisation was an important part of their social interaction in the workplace. I would often arrive at the cockle sheds to find groups of participants speaking about modernisation. It naturally emerged as a topic of common interest. The occasion when an object of interest, a new riddle, arrived at the sheds is a case in point.

This pattern of exchanging practical knowledge and opinions about modernisation with their counterparts in neighbouring, competing enterprises was reiterated by another informant who was keen to recount to me what he had learnt about a new processing technique:

One watchful informant reported that some of the Leigh merchants (under the flyover) had been using a technique called liquid freeze dry (LFD) to prolong the shelf life of the processed cockle after cooking. The inference was that it was going to be important to keep tabs on this experiment (2016 fishing season. Source: informant).

In a way that is similar to other examples of shellfish merchants learning about technology of significance to their work, this again shows how practitioner involvement was unavoidable. This unavoidability suggests that being well-informed about shellfishery modernisation has become a salient element in the self-image of a cockle merchant. Additionally, it seems possible that these findings exemplify learning through engagement in practice, although a more fundamental interpretation could perhaps be that participation in developing new practice is a dimension which, as Salaman (1974) asserts, stimulates strong and positive emotional involvement. More broadly, this inevitability of situated learning, whereby practitioners are expected to "negotiate their own enterprise",

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(Wenger, 1998, p. 241) illustrates how occupational reference groups can be motivated to support the development of their members' individual competence and the continuity of the community. In summary, these examples of endeavours to learn new competencies experientially on the job is a reality which is consistent with Wenger's (1998) core idea that learning happens through people's engagement in social practice.

I used the value chain analysis (Chapter 5) to highlight how harvesting and processing expertise could only be acquired through many years of being a Leigh-on-Sea cockle merchant. It could be said, based on the findings of this study, that when practitioners take it upon themselves to learn about new aspects of practice, this activity on an emotional level can boost their expertise. Seizing such opportunities to gain practice-based expertise by engaging in experiential learning can thus be said to enhance a practitioner's identity as a valued member of the community of which they are a part. The attitude expressed by informants about being constantly busy with intentional activity designed to sustain the shellfishery could, therefore, be acknowledged as a characteristic of the occupation of shellfish harvesting and processing. After all, the small-scale shellfishery in this study has shown itself to be a workplace where the phenomenon of modernisation has been steadied, in some ways normalised, through a culture of improvisation and collaboration.

Besides, when it comes to replicating and regularising improvisation, the community's inventiveness in this regard is a real attribute. Reference to shellfishery benefactor stories about improvisation, of which there is no shortage, suggests that this occupational community has normalised this form of creative, collaborative behaviour and understands that being oriented to collective action is a critical factor in the survival and modernisation of the shellfishery. Perhaps

the relatively small scale of the Leigh-on-Sea fishery helps more than it hinders in this respect. If so, it is a finding which broadly supports the work of the Norwegian scholars who examined modernisation in small-scale fisheries. Specifically, as discussed in the literature review, Johnsen et al. (2009) offer a correspondingly insightful understanding of modernisation, in which they refer to a trajectory of cyberorganisation to improve fisheries' performance.

What is interesting about this particular evidence in terms of characterising shellfish harvesting and processing is that it shows that this community has learnt how to internalise tools and technology in their everyday practice. In other words, the shellfish merchants have learnt how to learn. But just as importantly, significant learning has been achieved such as, in relation to how "*most people* [have learnt to] *use excavators to grab loose cockles from the boats*" (2012 fishing season. Source: informant).

My observations of mechanical excavators for unloading cockle are consistent with other previous historical recounted instances of technological adaptation within the shellfishery (e.g., the suction dredge and highly automated methods of production). This way of learning from each other in order to implement new practice appears to develop from sustained interaction. Interacting and collaborating in this manner makes sense to the shellfish merchants because they can negotiate and resolve shared concerns.

Although the shellfish merchants did not directly speak about learning in practice, this characteristic is a constant feature of their shared history of learning and mutual engagement. Indeed, stories of Leigh-on-Sea fishermen locally engaged in learning activity to change or innovate their practice are ingrained in the heritage and memory of the shellfishery. Past adoptions of new practice include

cooking cockles by steam rather than boiling (1890s), cockle boats installed with auxiliary engines (1918) and in 1967, the replacement of hand raking by mechanical dredging (Bride, 1954). History has shown that learning to authentically innovate has proven to help the community build upon traditional practice, engage in new situations and improve performance. All of these examples can be seen as a source of continuity and survival. Unsurprisingly, the shellfish merchants seem to understand and place particular emphasis on learning as a basis for problem resolution.

Interestingly, this aspect of engaging in certain actions to venture into unfamiliar territory (literally!) whilst simultaneously learning from other shellfish merchants can be extracted from empirical data in the form of visual evidence. To do this I will expand upon the specific observation of shellfishery infrastructure development introduced in Chapter 4. I will now translate this illustration from a photograph taken during the mid-point of the study.

As previously recounted, confronting the consequence of the creek silting up, and faced with the mooring difficulties because of a "*lack of water for long periods*" (2015 fishing season. Source: informant), each of the shellfish enterprises was pressed into an encounter which was to markedly change the topography of the shellfishery.

Photograph 11. Development on the foreshore to the rear of the cockle sheds

During my time in the field, I observed the ongoing efforts of each shellfish enterprise, to extend their respective jetties side-by-side into the creek. These infrastructure developments became the locus for collective action and collaboration with shellfish merchants actively pooling their resources to complete this project. Observing the jetty constructions was pure happenstance but, by being present at the time, I got a sense that the shellfish merchants, through their collective participation, forged a new identity for themselves and their locale.

In this regard I captured, in photograph 11, the mutually beneficial construction efforts to extend one of these jetties at an unfinished stage. The image powerfully documents an occupational community undertaking a substantial project as an element involved in an ongoing process of modernisation. At a glance the photograph draws together most of the conceptualisation of occupational communities already depicted in Figure 5.1: namely, participation and engagement, emotional involvement, shared repertoire, and shared reference

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group. In summary, the photograph is an abstraction of the community's emotional involvement situated in collaborative action to resolve a common problem. Correspondingly, from a CoP perspective, my photograph illustrates the conceptualisation of what Wenger (1998) would categorise as a joint venture. Finally, from a historical perspective, it could be said that the image authenticates the specific moment in the locale's changing typography. It depicts a moment which thus symbolises modernisation and stresses the temporal nature of shellfish merchant practice. I also elicited one further piece of material evidence from this image when it was contrasted to other photographs taken in the same place at another time.

5.6 Covert cultural meanings *(shram)*

The jetty construction process involved first preparing the foreshore and below-tide-level ground by laying hardcore foundations. These foundations were then piled and infilled with discarded cockle shell. Photograph 12 shows the completed jetty constructions including an abundance of equipment, machinery and, in the background, shipping containers used as temporary storage units. The new jetty space, created from the participants' emotional involvement in its development, subsequently led to a change in practice by improving manoeuvrability of plant and equipment during unloading and trans-shipment of harvested cockle.

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Photograph 12. Completed jetty constructions

In my value chain analysis (Chapter 4) I inferred that the word "*shram*", used in relation to the harvest of cockle from the seabed, has multiple meanings. Although only with the passing of three fishing seasons was I to learn about the coexistence of different meanings. The second occasion when the word *shram* was used by an informant was in relation to these jetty developments.

My informant, reflecting on the completion of the community's jetty construction work, designated the discarded cockle shell used to layer these constructions as *shram* (2015 fishing season. Source: informant). *Shram*, in the form of discarded cockle shells in photograph 13 represents both change and stability. For all of those who are familiar with the shellfishery, it is not an alien experience to walk

on discarded cockle - *shram*. Although it appears that whilst the shellfish merchants actively sense the texture of the foreshore formed by layers of small pieces of cockle shells to be *shram*, they do not openly speak about the foreshore as a physical place made from gradual accretion. The effect of this accretion and how it has rendered the current foreshore unrecognisable when contrasted to historical images is examined in the next chapter.

Photograph 13 Completed jetty constructions (*Shram*)

It is important to note at this juncture, that among the participants involved in this study, lessons in working, improvising and innovating together, facilitated through what I have termed 'collaboration', have been learnt over a relatively long period of time. This reality is consistent with Wenger's (1998) core idea that learning happens through people's engagement in social practice. Examples of how my

participants' community have mastered learning from past practice are discussed in Chapter 6. In the meantime, I will continue to process my abstractions of the field data to identify and capture those insights which are most relevant to the portrayal of the shellfish merchants as an OCoP.

5.7 Occupational work in a specific setting

I listened to participants' everyday conversations about attaining optimum harvesting performance by ensuring the dredge persistently stays over the targeted cockle bed (*shram*), and the importance of maintaining consistent alertness to behavioural norms such as the esoteric exactitude of attaining the required penetrative heat for cooking raw cockle. These cultural representations are indicative features of highly skilled occupational practice and, thus, factors which can stimulate emotional involvement. I draw on the affinity built up with my participants to highlight other relevant insights.

As is borne out by the value chain analysis (Chapter 5), cockle harvesting and processing involves both mental and manual work. The work is somewhat of an occupational anomaly in as much as it transcends any recognisable organisational structure or situation (van Maanen and Barley, 1984). To be a shellfish merchant means applying specialist technical know-how, balanced with a capacity to undertake manual labour. You also need to demonstrate an informed understanding of commercial fisheries management. Discovering that contemporary harvesting and processing practice, traditionally seen as craftwork, is increasingly weighted towards technical work has distinguished the way shellfish merchants see themselves.

The participants, on the whole, demonstrated that they identify as Leigh-on-Sea cocklers. This was reflected in the informal and situational set of circumstances I

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observed. That is, in their accounts of the activity and events at the shellfishery, respondents indicated that first and foremost they are interested in the locale which they share with their primary reference groups (competing shellfish merchants). As such, they identify with other shellfish merchants operating out of the port of Leigh-on-Sea and relate primarily to their immediate local work-world. I have selected four extracts (A-D) from field notes to example complaints and concerns expressed by respondents which are unambiguously local in this regard. The examples in Figure 5.2 suggest that a duality of a local context and the occupational nature of shellfish work seem to be factors which boost emotional involvement. These findings broadly support Salaman's (1974) studies where he used the classification of local occupational communities to characterise types of communities where practitioners share the same work situation and are all work-mates.

Example A relates to a major port development which, the shellfish merchants alleged, had impaired the quality of their cockle catch. Example B casts light upon a dispute with a local unitary authority. Example C demonstrates Leigh shellfishery member solidarity (with their immediate reference group who share the same work locale). The dispute was about a recent fisheries decision to grant additional licences. These licences would allow "newcomer" fishermen who had been granted a licence to harvest cockle, to take away raw cockle, but were not given permission or premises to process cockle. The final example, (D), illustrates the vulnerability of this geographically- bound occupational community who depend on the Thames estuary cockle beds.

Figure 5.2 Respondents' local concerns and complaints

A) Conversations about the Dubai ports development upriver (Tilbury/Shell Haven under the jurisdiction of the Port of London Authority) spilled over from the 2011 to the 2012 fishing season. A group representing the Leigh fishermen had been actively remonstrating with the authorities about the impact of this development, and specifically how this was bad news for the port of Leigh. However, the Dubai ports compensation claim being lodged by the shellfish merchants (collectively) has stalled. My informant added that the Leigh cocklers believe that they are likely to have to walk away because of escalating costs. In the words of my informant: "I think if we can show the dredging activities have caused water quality problems, we could have a case. Getting money out of DP World may not be that easy though. The damage to the stocks and the future effects are worrying to say the least." My informant gathered himself and then in a frustrated tone discussed the shellfishery's difficulties with me, '....no growth not only means a worse yield, it also means smaller cockle sizes and consequently loss of income on both counts.' The shellfish merchants were unanimous in their view that it was more than a coincidence that the Leigh-on-Sea catch quota had diminished recently, year on year since the port development had begun. (2012 fishing season. Source: informant)

B) Commenting on the recent increase in mooring fees, one informant alluded to the relatively higher fees (versus other foreshore locations in the vicinity). As well as having to pay the lease on the sheds and a mooring fee, my informant explained that merchants now have to lease the Leigh foreshore land between

the jetties and the processing units. Another informant commented how these charges were disproportionate to their summer *usage*. This [seemed] all very strange to an outsider like me because bizarrely the foreshore remains a public right of way. (2012 fishing season. Source: informant)

C) When speaking about those cockle fishermen not operating from Leigh (those without a shed, and thus no processing capability), participants were unanimously reproachful. My informant referred to these fishermen as "Johnny-come-latelys." For example, one participant commented that; "Those [wholesale processors] who have just set up over at xxxxxx (18 miles inland from Leigh) would love to get our cockles". (2012 fishing season. Source: informant)

D) The group gathered at the back of the cockle sheds …… speculated about the likelihood of a low catch this year. As I listened-in I sympathised with my informant about the situation. When talking about this issue, he remarked that in reality the impact of low catch yielding a diminished income for each of the Leigh merchants could be minimal. In the view of my informant, it was likely that because UK cockle catch as whole was forecast to be down too (supply and demand!), the general shortage would "hold up" the commercial sale price. (2015 fishing season. Source: informant)

I will briefly take a moment to elaborate on example C in the introduction of a contentious new practice which would allow raw cockle to be taken away and processed off-site of the shellfishery. I do not intend here to embroil the reader in the different sides of this argument. Instead, I want to draw attention to the photograph I used to elicit this information: photograph 14. I gleaned some

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intimate insight about the shellfish merchants' perceptions of themselves as cockle fishermen and processors versus those fishermen who do not own a cockle shed in cockle row and are therefore without a processing licence. My respondent offered this information (c) during a photo-elicitation interview.

Photograph 14. A sinister picture

In my fieldnotes reflections associated with this image I have simply labelled this a sinister picture. The record in my fieldnotes conveys my interpretation of my respondent's feelings when he looked at the image during a photo elicitation interview. My informant was expressing the view that fishermen without a licence to process should be forbidden from harvesting cockle. What became clear from this episode was that the shellfish merchants considered this development problematic because these newcomers deviate from normal shellfishery practice.

Similar sentiments about this perceived threat were expressed by another informant which underlines the important role that licences and permissions play

in sustainable shellfisheries management: "We *would get better yield when we process our own cockles because of the minimal time between harvesting and processing. Also, it allows us to remain independent of the big boys and to sell his cockles where we please. We would be better off financially if we closed our factories and sold all our cockles raw, but for how long?*" (Source: informant, 2013)

This vignette of evidence demonstrates how the shellfish merchants' work lives are interwoven with the immediacy of their place of work. This is another distinguishing feature of the occupation of being a Leigh-on-sea cockle merchant. It is an interpretation which reflects Salaman's (1974) account of occupational communities involved in local occupational activity with their workmates. Although in addition, the suggestion that the shellfish merchants as a collective resemble an occupational community is consistent with Whalley and Barley's (1997) classification of work comprising a balance of craft and technical work.

I found my participants, that is the cockle boat skippers, to be the knowledge overlords at the centre of the communities' endeavour, and those operatives restricted to more periphery roles were all engaged in similar activity which required them to share a complex interdependence of technical knowledge, and practitioner know-how. Sharing specialist knowledge related to both harvesting and processing in CoP terms was seen as mutually beneficial because it ensured the community possessed more than a trivial understanding of the community's inventory of practice and knowledge.

For instance, crew members would routinely demonstrate knowledge of mechanical engineering know-how through operating the moveable mechanisms which comprise the on-board suction dredge system for harvesting cockle, as

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described in Chapter 5, flushing dredging gear. Other activity such as processing cockle requires an understanding of strict cooking, cooling and refrigeration processes, plus the importance of adhering to industry standards. An example of this is provided in section 4.10 on the case for sticking to penetrative heat protocols based on contextual judgements about cooking.

Shellfish merchants have to pay particular attention to these handling requirements during warm summer months. This type of contextual knowledge is pooled by the shellfish merchants in what Wenger (1998) refers to as a shared repertoire of work practice routines, everyday rules and norms, work dialogues, machinery and tools. Decision-making about practice in these conditions, I would like to suggest, similar to Salaman (1974), provides a favourable context to increase the importance of shellfish work in the mind of the incumbent practitioner, thus provoking a positive attitude and, as a consequence, an emotional response. The results suggest, therefore, that emotional involvement is an important consideration in understanding what makes Leigh-on-Sea cockle work satisfying and meaningful.

Furthermore, the shellfish merchants have learnt to legitimise, replicate and regularise practice to resolve their problems. A clear example of this is the ingenious idea to use heavy plant and machinery to unload a catch of thin and fragile bivalve molluscs.

The activity of unloading cockle, which requires skill and agility to synchronise with the movements of the mechanical shovel so as to carefully grab loose cockles from the hold of a moored boat is a process dependent on proficiency. Although this regular practice became a visual constant in my observations, the human-machine aspect of this activity never failed to yield a positive, bewitching

response from me in my reflections. In my eyes this was a clever, technological improvisation, a genius imitation. To my participants this was simply a source of improved efficiency. Although more generally, this familiar interplay between operative, machinery and automated processing technology to improve cockle yield has perhaps revised the shellfish merchants' own conception of what it means to be a contemporary shellfish merchant.

In any event, as the catalyst for abandoning more labour-intensive methods, the learning and proficiency acquired in the process is interesting precisely because it is a good example of practitioners collaborating to resolve problems, validate change and modernise their practice. In this instance, of course, I was observing the finished article: a participant performing a sophisticated and intelligent activity typically technical in an occupational sense. From a practice perspective there is a notable community effect of this specialisation.

For one thing specialisation, in this instance required the cockle merchants to experientially learn the technical aspects of their practice together - in Wenger's (1984) terms; their learning was situated. Second, as a result, this so-called learning community, interactionally involved in their work on an emotional level, produced the possibility of refreshing their shared repertoire of resource. The sample in this study demonstrated their capability to update their learning and modernise their practice concurrently. As previously reported, the results of this study indicate that because of their common interest the shellfish merchants observed and imitated one another's practice. As work mates these independent merchants also routinely talked about their community's modernisation endeavour.

Furthermore, within the geographic proximity of their shared worked situation the shellfish merchants showed that they were able to make new meaning from modernisation as an abstract concept. The photographs in Chapter 6 in particular support this assertion. A key factor in all of this we can conceptualise as communal activity which, as acknowledged by Nicolini (2012), has the beneficial effect of unifying actions, activity and operations. A final point of interest from the findings verified that the repertoire of resource, at least in this instance, was not owned by any one shellfish merchant; it belonged to the reference group who shared the same work locale (Salaman, 1974). This confirms the crucial association between repertoire and practice (Wenger, 1998).

5.8 Some concluding remarks about circumstance and influence in OCoP

The estuary port of Leigh-on-Sea provides, as it has done for many years, a unique occupational setting. Although I do not know how far my discoveries represent conditions in other locations or other contexts, the results from this study do provide some support for the conceptual idea that local occupational communities stimulate a high-level of practitioner involvement in work activity.

I found that in this particular locale, practitioners were bound tightly to locally structured activity which galvanised sustained participation in practice. A possible explanation for this might be that the shellfish merchants were concerned to sort out their collective problems in the course of everyday, routine work practice. By analysing different harvesting and processing scenarios, I have tried to show that emotional involvement in practice underpinned by a localised occupational bond can act as an enabling factor when practitioners are involved in collective action. What is more, I've tried to underscore the point that shellfish merchants see themselves differently because of their high emotional involvement in

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occupational work practice. Also, in my abstractions of the field data I have attempted in this chapter to reveal those insights which are most relevant to the conceptualisation of the shellfish merchants as an OCoP. Along the way, I have spoken about, amongst other things, participation in practice, improvisation, practitioner attachment to their local workplace, and the internalisation of tools, technology and modernisation. I have foregrounded locale as a key factor and focus for resolving everyday occupational problems. Becoming aware that this community of practitioners stick together with more solidarity than might be expected from a collective of independent and competitive enterprises also influenced my interpretation. There is also more than a hint here that the common ties of interest that characterise a local OCoP manifest themselves in this study as improvisation and collaboration. However, one question that remains unanswered is how the shellfish merchants, away from the ties and embrace of an organisation with its more formal structure, relatively tighter work arrangements and greater managerial control, come to determine what they need to do in a coherent way as a collective entity. I attempt to answer this question in the final results chapter.

Chapter 6 Insights and perspectives on occupational CoP

6.1 Introduction

The third set of results (Chapter 6) offer further insights from the case study in the form of a comparative visual study of activity and work situations in relation to change and modernisation. By contrasting past and present images of shellfish harvesting and processing I attempt to verify the effect of modernisation on practice. Although this the shortest of my results chapters, it does offer a deeper interpretation of practice-based change, persistence and survival by exploiting the phenomenological properties of visual research data. There is again a historical and technological interest, and once again the focus is on access to resources, leaning and communal capacity for collective action.

I use this visual data to verify that, whilst the effect of modernisation on practice may well be transformational, the process of modernisation typically involves many intermediate steps. The photographs reveal practice and practitioners in a temporal state; an almost duality of occupational existence interwoven with the shifting dynamics of the specific locale (Ingold and Vergunst, 2008) to which shellfish merchants belong.

The chapter is essentially a brief and selective account of "what happened in the past and what it means that it happened" (Martin, 1993, p. 25) in an attempt to explain how modernisation could have happened within a local OCoP. I use the latter part of this chapter to address the same issue by asking a question about how the shellfish merchants determined what they needed to do. First however, as indicated earlier, I will focus on three photographs I took during my field work contrasted with 3 older photographs.

6.2 Supplementary visual data

The six photographs I have selected for analysis in this chapter contain more information and stories than I can do justice to in this short chapter. I have therefore thought carefully about how I use this supplementary evidence to represent my observations and experiences in relation to the aims and objectives of the thesis. One thing is certain, at a glance the selected images present an ongoing story about modernisation, aspects of practice, working arrangements and physical spaces which have changed or vanished. For instance, manually unloading cockle, or shelling cockle on the beach, or relying on manual labour to cook cockle on the beach can be classified as abandoned practice. The yolks in photograph 15 that were once used for unloading baskets of cockle have long been historical artifacts. Shellfish merchants' everyday activities and routines, along with their social relationships have all been impacted as consequence of this change. However, some material objects in the form of discarded tools and physical buildings are a testimony to the past when practitioners and machines were less physically connected.

The shellfish merchants, however, have also effected changes themselves. The images verify the inventiveness of the shellfish merchants in association with the ever-changing conditions of practice and place. The fieldnote extract from an informal conversation with an informant, who was a seasoned practitioner at the time of the study but has since retired, is pertinent in this respect. This extract (Figure 6.1), when associated with photograph 17 (Processing cockles before automation) highlights a complex temporal specificity unique to the locale. Moreover, this extract, supplemented by the visual image, illustrates what it

means to become knowledgeable about shellfish harvesting and processing. Furthermore, this extract, especially the quote, substantiates my earlier assessions about what occupational practitioners can achieve when they are emotionally invested in their work.

Figure 6.1 Recounting past practice

My informant was keen to kick start a conversation this morning standing outside the sheds. We spoke a little about white weed (although I'm still not sure what this is exactly) before he began recounting how, when he first embarked on cockle fishing, he used his blacksmith skills and some old metal bedsteads to make an improvised rake. He explained that this was all well before the Ventura system used for dredging and the subsequent fitting of solid handling pump system equipment to vessels; both of which were apparently forerunners to the current hydraulic dredge system familiar to me.

I must have looked aghast today when my informant asked if I had spotted him in the Pathe News archive video! We were looking at an old photograph of an operative manually sieving what he recounted was a batch of cooked cockle. "*Yes, that's right. That's me there. Look* (gesticulating to high care area of the cockle shed we were standing in). *I was stood right there when they* (Pathe News reporters) *did a piece on the cockle industry back in the 70s.*" (2012 fishing season. Source: informant)

The one image in this selection which possibly offers the most comprehensible sense of the past is photograph 19, particularly when contrasted with photograph 20. Photograph 20 incorporates the new jetty constructions. I consciously re-photographed the foreshore whilst referencing the older postcard image in an effort capture the same scene. When I returned to these two images I tried, unsuccessfully, to make sense of the changing topography. With the help of an informant, I was subsequently able to understand that the foreshore immediately

behind the sheds in the older image (19) sits at a much lower level. I learnt that the whole of the foreshore beach area is comprised almost entirely of *shram,* a cockle shell burial ground of the past. My informant clarified the situation for me during a photo-elicitation interview: "*Yes we made this place, didn't we?*" (2015 fishing season. Source: informant). Their respondent tone inscribed meaning on the special relationship between this OCoP and the ever-changing space which is Leigh-on- Sea shellfishery.

Photograph 15. The use of yolks for unloading cockle

Photograph 16. Unloading cockle using mechanised methods (Source: Leigh-on

Sea Heritage Centre)

Photograph 17. Processing cockles before automation (Source Pathe News)

Photograph 18. Computer-controlled cockle cooking and cooling

Photograph 19. The foreshore circa 1930 (Source: Leigh-on Sea Heritage Centre)

Photograph 20. The foreshore 2015

6.3 Interpretation of visual data

All of these changes, effected at a community level and introduced over decades, would have necessarily been negotiated. Proposals would first have been discussed and agreed with the immediate reference group before consultation with other stakeholders (or not in the case of the recent jetty extensions). Earlier in the thesis I spoke about how common ties of interest can bring a community together to resolve problems. As part of this thesis, I also explored how OCoP behave in a collaborative way and offered evidence which showed that my participants had learnt that improvement in performance can be achieved through improvisation of practice and collaborative working. This has helped me to understand how local OCoP can develop the capacity to withstand a sustained period of modernisation.

One conclusion I reached was that when practitioners are emotionally involved in their work, they can decide which practices to modernise, but also they can make critical decisions about which processes and rituals should remain as they are. The visual analysis in this chapter authenticates this insight by showing that that even when practice is gradually modernised, artifacts and cultural sediments attached to practice long since replaced are still in evidence. As such, practitioners can be said to have one foot in the past and one foot in the present. To illustrate this point, examples of sediments and artifacts embedded physically or culturally, or both, in current practice are visible in each of these images. Some of these aspects were discussed earlier in the chapter. I have also been able to authenticate the fact that, whilst the effect of modernisation on practice may well be transformational, the process of modernisation typically involves many intermediate steps.

On very much the same lines as Emirbayer and Mische (1998), these findings raise some intriguing questions about past practice; that is, questions about the forms of collective action exercised by actors in pursuit of survival and change when OCoP are as much preoccupied with past practice and tradition as they are about altering their practice.

My analysis, for example, despite an empirical element, fails to explain why the shellfish merchants' modernisation efforts were not constrained or derailed more than they were. There is, therefore, still a gap in understanding what made this modernisation effort possible in a small-scale shellfishery comprising of competing independent enterprises. In other words, it is hard to understand more precisely where these decision permissions came from so as to account for the origin of occupational samples agency.

6.4 Legitimising collective action in OCoP

It would appear that neither CoP, nor an alternative OCoP conceptual overlap, can provide all of the answers about how and what mobilised this collective action effort. On reflection I'm beginning to wonder if I became too preoccupied with conceptual frameworks and overlooked factors which could not be verified by existing research. My review of the literature does reason that some CoP scholars may have become bogged down in abstract theory, sometimes to the point of obsession with CoP (only) concepts and frameworks.

The interesting decision-making question which arises in relation to this seemingly ambiguous situation about how the shellfish merchants determined what they needed to do to effect collective action is where did the permission to modernise come from? It is for this reason that I invoke Salaman's (1974) conception of shared reference group, in an attempt to dig a little deeper. To

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recap, shared reference group is an essential feature of an occupational community, because it is the source of a practitioner's identity. That is, more precisely, a shared identity shaped by the common ties of interest, work connected values, and accustomed behaviour associated with being a practitioner affiliated with the same occupational group in a specific work situation (Salaman, 1974).

An associated supposition which could provide a way of looking at this question is the dual concept of licence and mandate. For some this conceptualisation is a key factor in the study of occupational work. Everett Hughes for instance, was among the first theorists to determine that whatever the type of occupational work group, there will ordinarily exist a licence and mandate. Hughes (1954) determined that a licence and mandate gave permission to carry out a certain practice or activity and verify those aspects of work and behaviour which constitute proper conduct respectively. In the context of CoP, and for my alternative formulation of OCoP, licence and mandate would therefore constitute a proprietary attribute of, to use Wenger's (1998) term, a community's shared repertoire.

6.5 A manifest for decision-making and collective action

A starting point is to proffer the notion that a community's reference group can only influence modernisation if it is granted authority to do so. If that is the case then such authority, vested in OCoP, such as for example, the Leigh-on-Sea community, would have to be negotiated, mutually agreed upon, and would instinctively manifest itself as a mandate. Although not fully developed, the idea that the legitimacy of most occupations rests upon the possession of a licence and mandate is consistent with the comments by Hughes (1958). The mandate

once comprehended by a community's members would be the common anchor or reference point for further consideration and ultimately collective action. In a CoP the mandate would constitute part of their shared repertoire.

To be explicit, I propose the term mandate as a way to describe the authority and agency vested in a community's reference group to enact change and modernisation. The mandate in my mind would serve as the locale's pronouncement on matters of competence, consistency, and compliance in relation to coherent decision permissions associated with sustainable practice. As such the mandate would form the foundation for community consultation and practitioner involvement associated with decision-making and collective action.

The main purpose of the mandate would be to create a discussion space for situational sensemaking and straightening out local troubles which could jeopardise a collective endeavour. A key purpose of the mandate would be to beckon practitioner involvement in something specific but typically collective.

My conjecture is therefore, that a mandate, which would represent practitioners' intentions about planned happenings and associated action, would likely remain impenetrable to anyone outside the practitioners' immediate reference group. Such a mandate could, however, provide the necessary collective sense of meaningfulness in the consciousness of the community and illuminate, with justification, the minds of the reference group on what is required by way of collective action and decision-making. The implication, speculatively speaking, in relation to the earlier question is, therefore, that modernisation can happen only when people have a mandate to alter their practice. In the context of occupational communities, a mandate might be location-specific, and conceivably, a mandated collective endeavour (Hughes, 1958) could help to mitigate the risk of supportive

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member deficit in OCoP. The risk could be lessened by fostering a deeper sense of emotional investment among community members. Or to put it another way, in these circumstances, competing logics, for instance always following the same practice or implementing new technology, could be overcome.

6.6 A mandate as a determinant of occupational communities

In summary, the mandate would sit at the intersection of community action and modernisation and provide the means to make community-led, practice-based modernisation meaningful. Perhaps the sample of participants investigated in this study demonstrated a degree of mandated decision-making. These practitioners, individually and collectively, have certainly provided a concrete example of an occupation governed by legal permission in the form of a licence to participate in the harvesting and processing. What is more, their endurance as a local fishing community would certainly seem to indicate that they have influenced, and been influenced by some sort of community mandate.

As explained earlier, this licence decrees permissions and protocols associated with cockle harvesting and processing in a defined geographical area. However, this rather narrowly bounded permission may go further than this in the minds of the shellfish merchants. That is, in the broader context of their everyday work the licence also appears to be perceived as a mandate which decrees their rights and responsibilities in the context of modernisation and the communities' involvement in any modernisation effort. The instance of newcomers harvesting raw cockle discussed earlier in the case study example this type of behaviour. Finally, it might be suggested that the possession of an occupational mandate is a defining characteristic of an OCoP. This is a possible area for further research work.

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Chapter 7 Conclusion

7.1 The aims of the study and findings

This study offers insights into the social dynamics and extant normalised occupational work behaviour in situations where communities share the same work location and are involved in similar activity. The results are the product of observational analysis of the same group of participants over several annual fishing seasons (2011-2018). As such, the study reveals a rich cultural description of the everyday work and drama that typifies small-scale fisheries in the UK.

The research has shown that whilst the effect of modernisation on practice may well be transformational, the process of modernisation typically involves many intermediate steps. The findings also indicate that modernisation has become a salient element in the self-image of the UK shellfish merchant. Furthermore, there is evidence to suggest that when people join forces and share resources to work on similar endeavours, the returns can be mutually beneficial for those involved.

The results also suggest that the phenomenon of emotional involvement in work practice is an important consideration in understanding what people perceive to be meaningful work. In this regard, the case study represents a deep interpretation of practice and collective action, where change, persistence and survival are shown to be a common concern. Correspondingly, a historical and technological perspective revealed that access to resource and knowledge, learning from participation in, and shaping, practice, together with a communal capacity for action are key factors likely to determine the extent to which modernisation efforts in the workplace will succeed. Finally, the findings also confirmed more generally that a capability to improvise and the willingness to collaborate are essential ingredients in any modernisation effort.

7.2 Implications for CoP theory

Overall, this study strengthens the conceptual idea of Occupational Communities of Practice (OCoP) as a line of theorising about practice-based studies. This could offer a more effective way to understand work associated with learning. An implication of this is the possibility that a nuanced theoretical perspective on more divergent types of communities and their work practice may energise Management and Organisation scholars and thus constitute a contribution to theory.

7.3 The limitations of the current study and future research

The limitations of the study are not overlooked. Key findings associated with each objective have been highlighted, supported with comments on the implications and knowledge contribution aspects of the work. More specifically, a key contribution of the thesis is the creation of a metaphorical bridge for further research into the conceptual overlaps between CoP and occupational communities. Also, more could be learned about the phenomenon of mandate associated with occupational practice in different types of occupational communities.

7.4 Recommendations for practice or policy

An important practical implication is that the future of shellfisheries' management and the challenges and opportunities of technological development across the sector may benefit from those findings which are relevant to shaping shellfish policy, for example regulations pertaining to quotas and TAC.

List of References

Alvesson, M., & Sköldberg, K. (2009). Reflexive methodology: New vistas for qualitative research (2nd.), Sage.

Amin, A., & Roberts, J. (2008). Knowing in action: Beyond communities of practice. *Research policy*, 37(2), 353-369.

and control in organizations. Research in Organizational Behavior, 6, 287-

Anteby, M., Chan, C. K., & DiBenigno, J. (2016). Three lenses on occupations and professions in organizations: Becoming, doing, and relating. *Academy of Management Annals*, 10(1), 183-244 .

Banks, M. and Morphy, H. (1997). Visual Anthropology. Yale University Press.

Barley, S. R. (1996). Technicians in the workplace: Ethnographic evidence for bringing work into organizational studies. *Administrative Science Quarterly*, 404-441.

Barley, S. R., & Orr, J. E. (Eds.). (1997). *Between craft and science: Technical work in US settings*. Cornell University Press.

Bell, E., & Davison, J. (2013). Visual management studies: Empirical and theoretical approaches. International Journal of Management Reviews, 15(2), 167-184.

Berger Peter, L., & Luckmann, T. (1966). The social construction of reality. A Treatise in the Sociology of Knowledge. The Penguin Press.

Berger, J., & Mohr, J. (2016). Another way of telling: A possible theory of photography. Bloomsbury Publishing.

185

Berger, P. L., Berger, B., & Kellner, H. (1973). The homeless mind: Modernization and consciousness.

Billett, S. (2004). Workplace participatory practices. *Journal of Workplace Learning,* 16 (6), 312-324. Bolisani, E., & Scarso, E. (2014). The place of communities of practice in knowledge management studies: a critical review. *Journal of Knowledge Management*, 18 (2), 366-381.

Blackmon, K. (2006). Reinventing, rediscovering, redesigning, and reinvigorating research practice in Operations Management, in EurOMA 2006 Conference Proceedings Vol. 1, 63-72.

Blaxter, L. Hughes, C. Tight, M. (2002). How to research, Open University Press.

Bochner, A. P. (2000). Criteria against ourselves. Qualitative inquiry, 6(2), 266-272.

Bratton, J., Mills, J. H., Pyrch, T., & Sawchuk, P. (2004). *Workplace learning. A Critical Introduction*. Toronto: Garamond Press.

Brewer, J., Ethnography. (2002). Open University Press.

Bride, H. N. (1992). Old Leigh. Museum handbook No. 12. Libraries, Art Gallery and Museum Committee: Southend on Sea.

Bridwell-Mitchell, E. N. (2016). Collaborative institutional agency: How peer learning in communities of practice enables and inhibits micro-institutional change. *Organization Studies*, 37(2), 161-192.

Brown, J. S., & Duguid, P. (1991). Organizational learning and communities-of-practice: Toward a unified view of working, learning, and innovation. *Organization Science*, 2(1), 40-57.

186

Bryman, A. and Bell, E. (2003). Business Research Methods. Oxford University Press.

Burges, R., In the Field. (1984). Routledge: London.

Callon, M. (1984). Some elements of a sociology of translation: domestication of the scallops and the fishermen of St Brieuc Bay. The Sociological Review, 32(1_suppl), 196-233.

Callon, M. (2008). Economic markets and the rise of interactive agencements: from prosthetic agencies to habilitated agencies. Living in a material world: *Economic Sociology meets Science and Technology Studies*, 1, 29-56.

Chaiklin, S., & Lave, J. (Eds.). (1996). *Understanding practice: Perspectives on activity and context.* Cambridge University Press.

Chaplin, E. (2002). Sociology and visual representation. Routledge.

Chuenpagdee, R., & Jentoft, S. (2019). Transdisciplinarity for small-scale fisheries governance. Analysis and practice. Cham: Springer Nature.

Clark, W. R. (1998). Agents and structures: two views of preferences, two views of institutions. *International Studies Quarterly*, 42 (2), 245-270.

Clegg, S. (2010). The state, power, and agency: Missing in action in institutional theory? *Journal of Management Inquiry,* 19(1), 4-13.

Cox, A. (2005). What are communities of practice? A comparative review of four seminal works. *Journal of Information Science*, 31(6), 527-540.

Cresswell, J. (2003). Research Design Qualitative, Quantitative and Mixed Method Approach. Sage.

Crowley, C., McAdam, M., Cunningham, J. A., & Hilliard, R. (2018). Community of Practice: A flexible construct for understanding SME networking roles in the Irish artisan cheese sector. *Journal of Rural Studies*, 64, 50-62.

Czarniawska, B. (2008). Organizing: how to study it and how to write about it. *Qualitative Research in Organizations and Management: An International Journal*, 3 (1), 4-20.

Davis, D. L. (1986). Occupational community and fishermen's wives in a Newfoundland fishing village. Anthropological Quarterly, 129-142.

Denzin, N. K., & Lincoln, Y. S. (Eds.). (2011). The Sage Handbook of Qualitative Research. Sage.

Donovan, F. R. (1920). The woman who waits. The Gorham Press..

Duguid, P. (2005). "The art of knowing": Social and tacit dimensions of knowledge and the limits of the community of practice. *The Information Society*, 21(2), 109-118.

Easterby-Smith, M., Thorpe, R., & Jackson, P. R. (2012). Management Research. Sage.

Eigaard, O. R., Marchal, P., Gislason, H., & Rijnsdorp, A. D. (2014). Technological development and fisheries management. *Reviews in Fisheries Science & Aquaculture*, 22(2), 156-174.

Emerson, R. Fretz, R. and Shaw, L. (1995) Writing Ethnographic Fieldnotes. Chicago.

Emirbayer, M., & Johnson, V. (2008). Bourdieu and organizational analysis. *Theory and Society, 37(1), 1-44.*

Emirbayer, M., & Mische, A. (1998). What is agency? *American Journal of Sociology*, 103(4), 962-1023.

European Commission. Fishing quotas (2020). Retrieved January 14, 2020 from https://ec.europa.eu/f:isheries/cfp/fishing_rules/tacs_en

Fenwick, T. (2008). Understanding relations of individual—collective learning in work: A review of research. *Management Learning*, 39(3), 227-243.

Fenwick, T. (2010). Re-thinking the "thing" sociomaterial approaches to understanding and researching learning in work. *Journal of Workplace Learning*, 22(1/2), 104-116.

Fisher, C. (2004). Researching and Writing a Dissertation for Business Students. FT Prentice Hall.

Fishfocus. (2020). Major shellfish policy initiative launched. Retrieved January 10, 2020 from https://fishfocus.co.uk/major-shellfish-policy-initiative-launched/

Flora, C.B., Flora, J.L. Spears, J.D. and L.E. Swanson. 1992. Rural Communities: Legacy and Change. Boulder, Colorado: Westview Press.

Fox, S. (2000). Communities of practice, Foucault and actor-network theory. *Journal of Management Studies*, 37(6), 853-868.

Fuller, A. (2007). *Critiquing theories of learning and communities of practice. In Communities of Practice (pp. 17-29).* Routledge.

Gherardi, S. (2009). *Community of practice or practices of a community.* The Sage Handbook of Management Learning, Education and Development, 514-530.

Gherardi, S., & Miele, F. (2018). *Knowledge management from a social perspective: The contribution of practice-based studies.* In The Palgrave Handbook of Knowledge Management (pp. 151-176). Palgrave Macmillan, Cham.

Gherardi, S., & Nicolini, D. (2002). Learning in a constellation of interconnected practices: canon or dissonance? *Journal of Management Studies*, 39(4), 419-436.

Goffman, E. (1959). *The presentation of self in everyday life.* Penguin Books.

Golden-Biddle, K., & Locke, K. (1993). Appealing work: An investigation of how ethnographic texts convince. Organization Science, 4(4), 595-616.

Gustavsson, M. (2007). The Potential for Learning in Industrial Work. *Journal of Workplace Learning*, *19* (7), 453-463.

Hammersley, M. and Atkinson, P. (2004). Ethnography: Principles in Practice. Routledge.

Hammersley, M., & Atkinson, P. (1995). Field relations. Ethnography: Principles in Practice. New York, NY: Routledge, 80-123.Hillery, G. A. (1955). Definition of community. Rural Sociology, 20, 111-123.

Handley, K., Sturdy, A., Fincham, R., & Clark, T. (2006). Within and beyond communities of practice: Making sense of learning through participation, identity and practice. *Journal of Management Studies*, 43(3), 641-653.

Hara, N. (2009). *Communities of practice: fostering peer-to-peer learning and informal knowledge sharing in the workplace.* Springer-Verlag.

Hara, N., & Schwen, T. M. (2006). Communities of practice in workplaces. *Performance Improvement Quarterly*, 19(2), 93-114.
190

Hardy, C., & Maguire, S. (2017). *Institutional entrepreneurship and change in fields.* The Sage Handbook of Organizational Institutionalism, 2, 261-280.

Harper, D. (2012). Visual sociology. Routledge: New York.

Herbert, S., For ethnography. (2000). Progress in Human Geography, 24, 550-568.

Herepath, A. (2014). In the loop: A realist approach to structure and agency in the practice of strategy. *Organization Studies*, 35 (6), 857-879.

Hodkinson, H., & Hodkinson, P. (2004). Rethinking the concept of community of practice in relation to schoolteachers' workplace learning. *International Journal of Training and Development*, 8(1), 21-31.

Holland, J. (2015). What's next for the U.K. shellfish industry? Retrieved January 10, 2020 from https://www.seafoodsource.com/features/what-next-for-the-u-k-shellfish-industry

Holm, P. (1995). The dynamics of institutionalization: Transformation processes in Norwegian fisheries. *Administrative Science Quarterly*, 398-422.

Holm, P. (2001). The Invisible Revolution--The Construction of Institutional Change in the Fisheries. ER.

Hughes, E. C. (1958). Men and their work. Greenwood Press: Illinois USA

Hughes, E. C. (1970). The humble and the proud: The comparative study of occupations. The sociological quarterly, 11(2), 147-156.

Hughes, J. (2013). Lost in translation: communities of practice–the journey from academic model to practitioner tool. In *Communities of Practice* (pp. 40-50). Routledge.

Ingold, T., & Vergunst, J. L. (Eds.). (2008). Ways of walking: Ethnography and practice on foot. Ashgate Publishing, Ltd..

Jankowicz, A. (2005). Business Research Projects. Thompson.

Jentoft, S., & Finstad, B. P. (2018). Building fisheries institutions through collective action in Norway. *Maritime Studies*, 17(1), 13.

Johnsen, J. P., Holm, P., Sinclair, P., & Bavington, D. (2009). *The cyberorganisation of the fisheries. On attempts to make fisheries management possible.* November 6, 2020   from https://www.researchgate.net/profile/Jahn_Johnsen/publication/284771794_The _Cyborgization_of_the_Fisheries_On_Attempts_to_Make_Fisheries_Managem ent_Possible/links/566e97b208ae1a797e406ae9.pdf

Johnson, P., & Gill, J. (2010). Research methods for managers. Research Methods for Managers, 1-288.

Jordanova, L. (2000). *History, 'Otherness' and Display*. In Cultural Encounters: Representing 'Otherness', Hallam, E. and Street, B, eds., Routledge, 2 (pp. 245-259).

Juriado, R., & Gustafsson, N. (2007). Emergent communities of practice in temporary inter-organisational partnerships. *The Learning Organization: An International Journal,* 14(1), 50-61.

Kerno Jr, S. J., & Mace, S. L. (2010). Communities of practice: Beyond teams. *Advances in Developing Human Resources*, 12 (1), 78-92.

Kessing, R. (1981). Cultural Anthropology. Harcourt Brace

Klein, H. K., & Myers, M. D. (1999). A set of principles for conducting and evaluating interpretive field studies in information systems. MIS Quarterly, 67-93.
192

Koliba, C., & Gajda, R. (2009). "Communities of practice" as an analytical construct: Implications for theory and practice. *International Journal of Public Administration,* 32(2), 97-135.

Lave, J., & Wenger, E. (1991). Situated learning: Legitimate peripheral participation. Cambridge University Press: New York.

Lawrence, T., Suddaby, R., & Leca, B. (2011). Institutional work: Refocusing institutional studies of organization. *Journal of Management Inquiry*, 20(1), 52-58.

Leblebici, H., Salancik, G. R., Copay, A., & King, T. (1991). Institutional change and the transformation of interorganizational fields: An organizational history of the US radio broadcasting industry. Administrative Science Quarterly, 333-363.

Lindkvist, L. (2005). Knowledge communities and knowledge collectivities: A typology of knowledge work in groups. *Journal of Management studies*, 42(6), 1189-1210.

Lipset, S. M., Trow, M. A., & Coleman, J. S. (1956). Union democracy: the internal politics of the International Typographical Union. Free Press.

Lloyd's Register Public Comment Draft Report Thames Cockle Dredge Retrieved January 9, 2020 from https://www.lr.org/en-gb/latest-news/thames-cockle-fishery-msc-blue-label/

Lounsbury, M., Anderson, D. A., & Spee, P. (2021). On practice and institution. Research in the Sociology of Organizations (*On Practice and Institution: New Empirical Directions),* 71, 1-28.

Low Impact Fishers of Europe (LIFE). (2020). Retrieved August 5, 2021 from https://lifeplatform.eu/.

Mangan, J., Lalwani, C. and Gardner, B. (2004). Combining quantitative and qualitative methodologies in logistics research, International Journal of physical Distribution & Logistics Management, 34, 565-578.

Margolis, E. (1998). Picturing labor: A visual ethnography of the coal mine labor process. *Visual Studies*, 13 (2), 5-35.

Marti, I., & Mair, J. (2009). Bringing change into the lives of the poor: Entrepreneurship outside traditional boundaries. *Institutional work: Actors and agency in institutional studies of organizations*, 92-119.

Martin, R. (1993). Objectivity and Meaning in Historical Studies: Toward a Post-Analytic View [Review of Objectivity, Method and Point of View: Essays in the Philosophy of History, by W. J. Van der Dussen & L. Rubinoff]. History and Theory, 32(1), 25–50. https://doi.org/10.2307/2505328

Matthews, C. (2021). Doing Immersive Research. Nottingham: CRM Publishing.

Maylor, H. and Blackmon, K. (2005). Researching Business and Management. Palgrave.

McNiff, J., Lomax, P. and Whitehead, J. (1996). You and Your Action Research Project. Routledge

Micelotta, E., Lounsbury, M., & Greenwood, R. (2017). Pathways of institutional change: An integrative review and research agenda. Journal of Management, 43(6), 1885-1910.

Miller, M. L., & Van Maanen, J. (1979). "Boats Don't Fish, People Do": Some Ethnographic Notes on the Federal Management of Fisheries in Gloucester. *Human Organization*, 377-385.

Miller, M. L., & Van Maanen, J. (1982). Getting into fishing: Observations on the social identities of New England fishermen. *Urban Life*, 11(1), 27-54.

Miller, M., & Pollnac, R. B. (1978). Responses to the fisheries conservation and management act of 1976: the port of Gloucester. Sociology and Anthropology Department, University of Rhode Island.

Mills, C.W. (1956). *White Collar: The American Middle Classes.* Oxford University

Mills, S. (2011). *Communities of practice and politeness*. In Davies, B. Haugh, M. and Merrison, J (Eds.), Situated Politeness (pp. 73–87).

Morgan, G., and Smircich, L. (1980). The case for qualitative research. Academy of Management Review, 5(4), 491-500.

Murillo, E. (2011). Communities of practice in the business and organization studies literature. *Information Research*, *16* (1), 16-1.

Myers, M. D. (2019). Qualitative Research in Business and Management. Sage.

Nelsen, B. J. (1997). Work as a moral act: how emergency medical technicians understand their work. In Barley S. and Orr. J (Eds.), *Between craft and science: technical work in US settings* (pp. 154-1894). Cornell.

Nicolini, D. (2012). Practice theory, work, and organization: An introduction. OUP: Oxford.

Nicolini, D., Pyrko, I., Omidvar-Tehrani, O., & Spanellis, A. (2022). Understanding Communities of Practice: Taking Stock and Moving Forward. *Academy of Management Annals*

Nicolini, D., Pyrko, I., Omidvar-Tehrani, O., & Spanellis, A. (2022). Understanding Communities of Practice: Taking Stock and Moving Forward. Academy of Management Annals (ja).
195

Orr, J. (1996). Talking about machines: An ethnography of a modern job. Cornell.

Osborne Brothers Cockle Merchants Retrieved January 9, 2020 from https://www.osbornebros.co.uk/about.html

Palsson, H. (2007). Participant observation in logistics research: Experiences from an RFID implementation study. International Journal of Physical Distribution Management, 37, 2, 148-163.

Patel, C. (2018). *An Analysis of Jean Lave and Etienne Wenger's: Situated Learning: Legitimate Peripheral Participation*. Macat Library.

Perlow, L. A., and Bailyn, L. (1997). The Senseless Submergence of Difference: Engineers, Their Work and Their Careers. In Barley. S and JE Orr. (Eds.), J *Between Craft and Science: Technical Work in US Settings (pp. 230-243)*. Cornell.

Peters, R. (2019). The Interrelationship between Structure and Collective Actors. *Historical Social Research/Historische Sozialforschung*, 44 (4 (170), 96-128.

Pickett, G. (1973) The impact of mechanical harvesting on the Thames estuary Cockle fishery. Laboratory leaflet No. 29.

Pink, S. (2013). Doing visual ethnography. Sage.

Pink, S. (Ed.). (2012). Advances in visual methodology. Sage.

Porter, M. (1985). Competitive Advantage: Creating and Sustaining Superior Performance. Free Press

Pyrko, I., Dörfler, V., & Eden, C. (2019). Communities of practice in landscapes of practice. *Management Learning*, 50(4), 482-499.

Rainbird, M. (2006). The value chain - a practitioner's perspective, in EurOMA 2006 Conference Proceedings Vol. 1, 375-381.

Reiss, A. J. (1959). The Sociological Study of Communities. *Rural Sociology*, 24(2), 118.

Roberts, J. (2006). Limits to communities of practice. *Journal of Management Studies*, 43 (3), 623-639.

Rose, G. (2002). *Visual methodologies: An introduction to researching with visual materials.* Sage.

Rose, G. (2016). Visual Methodologies. Sage

Rudestam, K. and Newton, R. (2001). Surviving your Dissertation. Sage

Salaman, G. (1971). Two Occupational Communities: Examples of a Remarkable Convergence of Work and Non-Work. *The Sociological Review*, 19(3), 389–407. https://doi.org/10.1111/j.1467-954X.1971.tb00638.x

Salaman, G. (1974). Community and occupation: An exploration of work/leisure relationships (No. 4). CUP Archive.

Schouten, J. W., & McAlexander, J. H. (1995). Subcultures of consumption: An ethnography of the new bikers. Journal of Consumer Research, 22(1), 43-61.

Schwandt, T. A. (1994). Constructivist, interpretivist approaches to human inquiry. Handbook of Qualitative Research, 1(1994), 118-137.

Shellfish Association of Great Britain https://www.shellfish.org.uk/

Shellfish Industry Development Strategy Retrieved January 9, 2020 from http://www.shellfish.org.uk/files/PDF/22622best_practice_guide.pdf

Smith, S. U., Hayes, S., & Shea, P. (2017). A Critical Review of the Use of Wenger's Community of Practice (CoP) Theoretical Framework in Online and Blended Learning Research, 2000-2014. *Online Learning*, 21(1), 209-237.

Spradley, J. (1980). Participant Observation. Wadsworth Thomson Learning.

Spradley, J. P. (1980). *The Ethnographic Interview*. Thompson Learning.

Spradley, J. P. (2016). Participant observation. Waveland Press: Illinois USA.

Steier, F. (1995). Reflexivity, Interpersonal Communication, and Interpersonal. Social Approaches to Communication, 63.

Storberg-Walker, J. (2008). Wenger's communities of practice revisited: A (failed?) exercise in applied communities of practice theory-building research. *Advances in Developing Human Resources*, 10 (4), 555-577.

Sustainable Food Trust. (2020). The value of small-scale fishing. Retrieved July 27, 2013 from https://sustainablefoodtrust.org/articles/the-value-of-small-scale-fishing/

Swan, J., Scarbrough, H., & Robertson, M. (2002). The construction of Communities of Practice in the management of innovation. *Management Learning*, 33 (4), 477-496.

Symes, D., Cardwell, E., & Phillipson, J. (2020). UK Small-Scale Fisheries: Status, Devolved Responsibility and the Challenge of Sustainability. *Small-Scale Fisheries in Europe: Status, Resilience and Governance*, 23, 351.

Thatcher, S. M., & Fisher, G. (2022). From the Editors—The Nuts and Bolts of Writing a Theory Paper: A Practical Guide to Getting Started. Academy of Management Review, 47(1), 1-8.

The Ministry of Agriculture, Fisheries and Food. (1972). The Cockle and its Fisheries. Laboratory Leaflet (NEW SERIES) No 26. Retrieved January 9, 2020 from https://www.cefas.co.uk/publications/lableaflets/lableaflet26.pdf

The Ministry of Fisheries and Food. https://www.cefas.co.uk/publications/lableaflets/lableaflet29.pdf

Tinkler, P. (2013). Using photographs in social and historical research. Sage: India.

Tonnies, F. (1887/1955). *Community and Association*. Routledge & Kegan Paul.

Tracy, S. J. (2010). Qualitative quality: Eight "big-tent" criteria for excellent qualitative research. Qualitative Inquiry, 16(10), 837-851.

Trice, H. M. (1993). *Occupational subcultures in the workplace*. Cornell University Press.

Trice, H. M., & Beyer, J. M. (1993). *The cultures of work organizations*. Prentice-Hall, Inc.

Turner, J. H. (1986). The theory of structuration: Review. University of California Press *American Journal of Sociology*, 91 Number 4 (January), 969-77.

UK Fisheries Statistics. Briefing paper. The House of Commons Library research services. (2020). Retrieved from https://researchbriefings.files.parliament.uk/documents/SN02788/SN02788.pdf

UK sea fisheries statistics (2018). January 12, 2020. Retrieved from https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/863732/UK_sea_fisheries_statistics_2018.pdf

199

Van Krieken, R. (1997). Sociology and the reproductive self: demographic transitions and modernity. *Sociology*, 31(3), 445-471.

Van Maanen, J. (1988). Tales of the field: on writing ethnography. University of Chicago Press

Van Maanen, J., & Barley, S. R. (1982). *Occupational communities: Culture and control in organizations*. Praeger Publishers.

Van Maanen, J., Dabbs, J. M., & Faulkner, R. R. (1982). Varieties of qualitative *research (Vol. 5).* SAGE Publications.

Van Maanen, J., Miller, M., & Johnson, J. (1980). An Occupation in Transition: Traditional and Modern Forms of Commercial Fishing. October 9, 2020 from https://dspace.mit.edu/bitstream/handle/1721.1/1962/SWP-1124-09015645.pdf?sequence=1&isAllowed=y

Vince, R. and Warren, S. (2012) 'Qualitative, participatory visual methods', in C. Casselland G. Symons (eds) The Practice of Qualitative Organizational Research: Core Methods and Current Challenges, London:Sage , 275 – 295 .

Ward, A. (2000). Getting strategic value from constellations of communities. *Strategy & Leadership, 20,4-9.*

Ward, J., & Peppard, J. (2002). Strategic planning for information systems. John Wiley & Sons, Inc.

Wasko, M. M., & Faraj, S. (2005). Why should I share? Examining social capital and knowledge contribution in electronic networks of practice. *MIS Quarterly*, 35-57.

Wasko, M. M., Faraj, S., & Teigland, R. (2004). Collective action and knowledge contribution in electronic networks of practice. *Journal of the Association for Information Systems*, 5(11), 15.

Webb, E. J., Campbell, D. T., Schwartz, R. D., & Sechrest, L. (1999). Unobtrusive measures (Vol. 2). Sage

Weir, D. (Ed.). (1973). Men and work in modern Britain (Vol. 3195). Fontana Press.

Wenger, E. (1998). Communities of practice: Learning, Meaning and Identity. New York: Cambridge University Press.

Wenger, E. (2001). Communities of practice and social learning systems. Supporting Lifelong Learning: Volume II: *Organising Learning*, 2, 160.

Wenger, E. (2010). Communities of practice and social learning systems: the career of a concept *In Social Learning Systems and Communities of Practice* (pp. 179-198). Springer.

Wenger, E., McDermott, R. A., & Snyder, W. (2002). *Cultivating communities of practice: A guide to managing knowledge*. Harvard Business Press.

Wenger-Trayner, E., & Wenger-Trayner, B. (2014). *Learning in a landscape of practice: A framework.* (pp. 13-29). Routledge.

Whalley, P. & Barley, S. R. (1997). Technical work in the Division of Labour: Stalking the Wily Anomaly (pp. 23-52). In S. Barley and J. Orr. (Eds.), Between Craft and Science: Technical Work in US Settings., New York: Cornell University Press.

Yin, R. K. (2009). Case study research: Design and methods (Vol. 5). Sage.

Electronic Sources