

A Criminological Critique of Body Worn Cameras in Policing: The Case of the United Arab Emirates

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Abbreviations

Abbreviation	Full wording
ANT	Actor Network Theory
BWC	Body worn camera
CGT	Constructed grounded theory
CI	Critical Incident
CID	Criminal Investigation Department
F2F	Face-to-face
GT	Grounded theory
ICV	In-care video
IMF	International Monetary Fund
P2C	Police-to-citizen
PO	Police officer
RQ	Research question
SCT	Socio-cultural theory
SOP	Standard operating procedures
TAM	Technology acceptance model
TPB	Theory of Planned Behaviour
TRA	Theory of Reasoned Action
UAE	United Arab Emirates
UDHR	Universal Declaration of Human Rights
UK	United Kingdom
UN	United Nations
US	United States of America

WB	World Bank
WSJ	Wall Street Journal
ZDP	Zone of Proximal Development
Data enumerations	
ASO-O/n	Active service officers, observation
CID-CI/n	CID officers and critical incidents
APS/n	Alshabiya Police Station
KPS/n	Khalif Police Station
PF	Public Prosecutor
SID	Strategy and Institutional Development Centre
ITS + ITS-M	Information & Communications Systems
CI-P and CI-P/M	Criminal Investigation Department
SSC-M/n + SSC-F/n +	Social Support Centre, male/female
PPD/n	Police Prison Department

Abstract

The thesis critically examines the qualitative experiences of Body Worn Cameras (BWCs) amongst a sample of police officers in UAE prior to the formal implementation of this technology. It considers the relevance, strengths and limitations of BWC technology and use in the context of UAE providing a coherent critical theoretical assessment of the use of BWCs in UAE against the extant criminological, sociology of technology and service innovation and learning literature.

The research composes, present and analyses three qualitative datasets; firstly, the results of three-months observation of Abu Dhabi Patrol Officers' use of BWC, secondly the results of 700 hours of critical incidents chosen by criminal investigation officers as illustrating issues relating to the use of BWC and thirdly, the results of thirty-eight interviews with junior and senior police officers selected from the Abu Dhabi force for their familiarity with various aspects of BWC usage.

The thesis reviews all of the previous research on use of BWCs by police concluding that much of this literature is not relevant outside of the US and UK where it was conducted, since police in these countries face legitimacy challenges from minority (often racial groups) which distorts the reasons for introducing BWCs and the use to which they are put. The research further concludes that effective use of the occupational cultures as a lens for understanding innovations such as BWCs is only effective where wider culture and context is also reference. For example, in Abu Dhabi the Arab and Islamic culture and context significantly affects the logic of practice in using BWCs. These two conclusions form the major theoretical contribution of this research.

CHAPTER-1 INTRODUCTION

1.1 Purpose and research gap

To the casual observer policing in the United Arab Emirates (UAE) faces few problems. As the Khaleej Times (2018) notes, now has the lowest crime rate in the world with violent crime per 100,000 of population falling from 120 per year in 2011 to 83 per year in 2015. The Deputy Prime Minister and Minister of Interior, Sheikh Saif bin Zayed Al Nahyan, proudly notes public satisfaction with the UAE's police force is at 87% and rising: significantly better than the US or UK.

Yet WSJ (2017) notes that the UAE has joined the 6,000 police forces (18,000 forces in the world) using body worn cameras (BWCs). There are multiple aims associated with introducing BWCs: improving accountability and transparency (Hedberg *et al* 2017); a civilising effect on police officer and citizens' behaviour (White 2014); evidence gathering and successful prosecution rates (Katz *et al* 2014) and potential improvement of police occupational culture (Young and Ready 2015). Yet numerous authors point to a lack of evidence for these potential effects of BWCs including Jennings *et al* (2014). Amongst the few empirical studies the Rialto (California) police department (see Jennings, Lynch and Fridell 2014) and Ready and Young (2015) are the most cited. Yet, as I will argue, these studies (a) have serious methodological issues and (b) they relate to the culture and context of the US. There is no study of the introduction of BWCs in any Arab, Islamic or Gulf country: and the present thesis addresses that gap.

The *Black Lives Matter* movement in the US is a result of the unfortunate and unjustified shooting of Michael Brown in Missouri, giving rise to further public debate on the legitimacy and accountability of policing. As Peck (2015) notes policy makers are increasingly turning to technology, such as in-car video and BWCs, as a means of strengthening police legitimacy as Ariel *et al* (2015) and Coudert *et al* (2015) also note. Ellis *et al* (2015) for example, note the high public approval of BWCs in Hampshire, England. Arresting, convicting or killing the wrong person is one of the worst professional errors one can make. Richard Ofshe (1995) likened it to a physician who

amputates the wrong arm. The complaints of people who have been wrongly arrested or convicted or from the families of people who have been shot by police officers are ever increasing (CNN, 2015). For many years, writers, mostly lawyers, journalists, and human rights groups have discussed multiple arrests, convictions, and killings of civilians who are innocent and described the causes of these actions and consequences. Nevertheless, only recently, after decades of neglect, have a critical number of researchers and social scientists emerged to investigate the problem (Leo 2005). This heightened interest in the issue is unquestionably correlated to political and technological developments. There has been much documentation about the miscarriages of justice in the countries such as the United States starting with Edwin Borchard's work *Convicting the Innocent* (1932). Borchard challenged the conventional wisdom, that there are no innocent people imprisoned in the United States by detailing sixty-five cases in which innocent people were wrongfully arrested, convicted, and imprisoned. Borchard asked not "whether innocent people are wrongfully arrested and imprisoned" and instead "why and what can be done about the issue." He documented a number of causes of wrongful arrests and convictions police wrongdoing. Years later, several solutions have been devised and some implemented to eliminate the problem of wrongful arrests and convictions. One of the ways contributing to the elimination of false evidence is the use of BWCs by law enforcement officers. The law enforcement agencies need to do a better job of separating the innocent from the guilty in cases that rely entirely, or even partially, on confession evidence. As Russiano, Meissner, Narchet and Kassin (2005:481) have argued, the criminal justice system should seek to implement procedures that are diagnostic, meaning the ones that increase the rate of true confessions while minimising the rate of false confessions. Though the police will inevitably elicit some false confessions, the system needs to adopt BWCs in order to be able to filter out such types of unreliable evidence so that it does not enter them into the stream of evidence used to prosecute and convict innocent people. Issues of governance and accountability remain important in policing, however, from the viewpoint of practice police professionals this body of research insufficiently addresses how and why the occupational culture of policing is affected by the introduction of new technologies such as BWCs. My research addresses this gap in research literature and in doing is the first empirical research on the occupational of professional police officers in an Arab, Islamic or Gulf area.

In summary, though policing in the UAE is already effective by some measures, BWCs have been introduced with the intention of further improving its services. There is little empirical research literature on BWCs and none relating to their use in an Arab, Islamic and Gulf culture and context: this research addresses these gaps and does so from the viewpoint of Police Officers and their occupational culture.

1.2 Research problem

User-oriented technological innovations in services have a long intellectual genealogy from von Hippel's (1982) work on user-led innovation to more recent work on service innovation as open innovation (Chesbrough 2011). Three major themes from this body of literature now feature in criminological studies of BWCs. These themes are the unintended consequences and cumulative causations resulting from technological innovations in services. Early literature in this field includes Freeman (1988) and current contributions referencing this theme in the field of criminology include Maury (2013) and Jacob *et al* (2016).

A second theme from user-led innovation research is the nature of users and usability. Early research in this area include Adler (1999) and more recently in the field of criminology, Taylor's (2016) discussion on who are the users. My research draws from this tradition and looks at BWCs from the viewpoint of a particular set of users: police officers.

Thirdly, police officers are professional service workers: using formal knowledge and cumulated wisdom to make important judgements unavailable to people using their services (in this case citizens, criminals and courts). As Arthur (2008) notes, technologies are best viewed from a 'complexity' viewpoint i.e. individuals and organisations in the professional shape the acceptance and use of technologies informed by the cultural and contextual setting in which the innovation occurs – in this case the UAE.

This research synthesises these three themes with criminological research to analyse the problems associated with and arising from the introduction of BWCs into UAE's policing services. Just as the issues and problems of technological innovation in

professional services is multi-faceted; this research is multi-disciplinary and aims to create a new synthetic intellectual lens through which to analyse BWCs.

1.3 Aims and objectives

The research aims to assess the impact of BWCs on Police Officers in UAE, looking in particular at how their professional practice is reshaped. Since there is little previous empirical research on BWC and no previous research on its introduction into an Arab, Islamic or Gulf context and culture, this research is exploratory: definitions, causal relationships and classifications have yet to crystallise. In drawing up a new framework with which to analyse BWCs in UAE policing, the research aims to contribute to criminological studies by synthesising criminology theory with theories of service innovation, professional occupational cultures and complexity theory. As exploratory research, the work examines how roles, relationships and responsibilities alter as a result of the BWC innovation. BWC implementation has resulted in new emergences in these roles, relationships and responsibilities, which are new and dynamic; in the absence of clear and accepted definitions and causalities, this research is entirely qualitative. The research focuses on the opportunities for practicing police officers of BWCs; hence a major aim of this research is to make suggestions of how in practice, in the UAE, the use of BWCs can be improved, with a view to thereby improving the service that police officers provide to the public.

Within these general aims, my research has the following four core objectives, which distil into the research questions in section 1.4 below.

1. To critically examine the *experiences* of Abu Dhabi Police Officers wearing and using BWCs, accumulating evidence for how the Officers interpret these experiences;
2. To analyse the *effects* of using BWCs on the occupational culture of Abu Dhabi Police as practices in their daily duties, making (literature-based) comparisons with effects and experiences in other countries;
3. To provide a new and coherent theoretical approach with which to *analyse* BWCs that references the particular culture and context into which they are introduced and compare this with approaches in existing literature – drawing from criminology, sociology, innovation, and services literature.

In order to meet these aims and objectives the research conducts a detailed analysis of relevant literature extracting relevant concepts and gaps. These concepts will feature

in a new analytical framework (Chapter-3) and from the gaps in the literature research questions are selected giving intellectual rigour and focus to the research.

1.4 Literature and arguments

This section summarises some of the main arguments and contributions from this research.

1.4.1 Police occupational culture in an Arab/Islamic culture and context

Cockcroft (2013) argues convincingly that much of the work on police occupational culture offers a negative portrayal as a justified use of force and social control. He goes on to suggest this is the result of a structurally-deterministic view of the police and in particular their interactions with groups such as women, gays and racial minorities. The present study reinforces Cockcroft's assertion whilst adding that the body of literature on police occupational culture is highly ethnocentric and wholly inapplicable to the Arab/Islamic culture and context of UAE.

Barton's (1964) work in the US south and Scotland began the genre of viewing the police as a craft grouping involved in a number of "us versus them: struggles; these include resisting professionalisation and group bonding at (what we would now call) street level bureaucracy level (Lipsky 2010) a viewpoint that defends police officer choices in against whom to exercise violence and criminalisation. Cockcroft (2013) later spoke of the *working personality* of Officers picturing *symbolic assailants* and Bittner (2013) *situationally justified force* to maintain social order. This perspective assumes as Wilson (1968) suggests, that street-level Officers have autonomy and little accountability to constabulary leadership and are able to control upward information flows in flawed governance systems (Chatterton 1976). Occupational culture within this western criminology perspective is at one level supported by disturbing media crime reporting, while at the same time challenged by technology and information systems giving rise to patterning of police behaviour. This negative and unidimensional portrayal of police occupational culture, in which technology and professionalisation are challenge police legitimacy and group loyalties are not a picture recognisable in UAE, whereas this thesis will argue, the occupational culture of the police appears citizen-centred, more accountability with the police hierarchy and in an Arabic and Islamic culture concerned with social support rather than control.

1.4.2 The sociology of police technology in an Arab/Islamic culture and context

The sociology of technology perspective (McKenzie and Wajcman 1985; Rosenberg 1982; Bell 1972) holds that all technology innovations are non-linear and socially shaped (Latour 1987; 1988). As Archer (2003) argues, it is insufficient simply to use “culture” or habitus (Bourdieu) as a justification for how technology is viewed and used, since culture and wider institutions are social constructions arising from patterned behaviour, understandings and language (metaphor). One cannot simply transpose into a UAE context and culture (for example) Hedberg *et al*’s (2017) views on BWCs and accountability or White’s (2014) argument on their civilising effects. Nor can one assume that individual learning and organisations embedding technology in their practices, procedures and hierarchy will respond in the same way across cultural fields. Reiner (2015) makes the important point that ethnocentrism is an important obstacle to rigorous research on occupational culture in policing. As catch-all phrases technological and social are not only lazy thinking, they frame dilemmas and interpretations in a particular manner. Hampden-Turner (1990) shows that formulation of dilemmas varies across cultures and Morais-Storz *et al* (2017) amongst others shows how processes of dilemma resolution can be culturally-specific. This research therefore problematises BWC in the UAE culture and context; it triangulates with previous research, while seeking to ground interpretations of how BWCs are used and interpreted in evidence from the UAE.

1.4.3 Dynamic professions and change in an Arab/Islamic culture and context

The nature of professions is variously characterised as functional specificity (Parsons 1956), power elite (Johnson 1972) or a knowledge domain (Freidson 1988). Torstendahl (1990) argues the nature, meaning and social status of professions varies between time and (social) space, points Sennett (2004; 2008) endorses this point by showing how a profession’s practice alters as society changes. From the viewpoint of Police as a profession in UAE, this research investigates how and what formal knowledge they acquire in training (Weick 1979), their enculturation processes (Grusec and Hastings 2007) and construction of identities (Goffman 1963). This approach is undertaken in order to socially ground their occupational culture in order to analyse and explain their use and understanding of BWCs. In doing so, this research provides the first deep analysis of UAE’s police as a profession and portrait of their occupational

culture. In particular, this research aims to understand the nature of learning in relation to novel technologies by UAE police.

1.4.4 Developing a situated analytical framework for learning

Arthur's (2008) complexity perspective emphasises problematising technology situationally and contextually since in all social ecosystems human agents exercise judgements based upon culture and learning. Cognitive agency is arguably missing from perspectives such as the Technology Adoption Model a deterministic perspective and Actor Network Theory, which attributes agency to non-human artefacts. This research uses Vygotsky's (1934) socio-cultural model of learning, synthesised with the complexity perspective to create and justify a new framework for use in analysing how UAE police interpret BWCs (see Daniels 2012, *Vygotsky and Sociology*). This framework (see Illeris 2008) takes the active agent individuals as part of the police organisation as interpreting BWC using inherited frameworks, metaphors and knowledge, in the context and culture of UAE. Thus, individuals and organisation interact with culture and context to create the new understandings resulting from BWC introduction. This new framework (adapting Charmaz's [2008] constructed grounded theory) is a major theoretical contribution of this research.

The choice of Vygotsky approach stems from my belief that interpretation is a form of learning since it involves comparisons, wondering, clashing previous experience with new information and experiences. The principal theorist used to explain learning is Lev Vygotsky, a Russian psychologists/meta-physicist working in the 1930s. He rejected Piagetian cognitive models as taking no account of context and culture of learning and behavioural theory as not including consciousness. Instead, as Daniels (2012) in *Vygotsky and Sociology* shows, Vygotsky argues that frameworks of thinking and emotional attachment combine with experiences and new practice or information to create new ideas: individuals learn, referencing their organisational setting along with context and culture. The idea that as Wertsch *et al* (1995:25) say, *we can never speak from nowhere*, forms a connection point between interpretation as learning and the mediation of meaning in wider social structures – the domain of sociology (Fitz 2007). Basil Bernstein is a good example of sociologists taking this cultural 'turn' by incorporating Vygotskian concepts into their analysis, arguing (2000) in a Durkheimian tradition that collective representations are social interpretations of human cognitions;

an approach also found in Engeström *et al*'s work (1999). Whereas ethnomethodology and social interactionism look for symbolic meanings in context, as Makitalo and Saljo (2002) Bernstein takes the reverse route of citing how context influences meaning i.e. how knowledge is constructed at structural and interactional levels. For Bernstein restricted and elaborated codes of interpretation are the result of interaction between active agents' identity and inherited cultural meanings (Holland *et al* 1998); interpretation becomes in Hasan's (2001; 2005) social positioning. The Vygotskian approach to learning quite easily then aligns with modern sociological approaches. In this thesis Vygotskian frameworks are used to explain (a) the processes by which POs interpret BWCs and (b) how patterns of practice come to constitute an occupational culture and its reproduction.

1.4.5 Literature gaps

To take stock, from the gaps in the literature identified in a literature review, this research selects firstly, the application of the sociology of technology to the UAE Arabic and Islamic context and culture and using BWC as an example illustrates how problematising the technology creates a superior understanding of issues than alternative approach, which denies or de-centres human agency or lapse into technological or social determinism. Secondly, the research is the first to apply the concepts of professionalism and occupational culture to the Abu Dhabi police and in doing so offers a rich understanding of the culture and context shaping the meaning of these concepts in the UAE; a previously under-researched area. Thirdly, building a new learning framework applicable to the UAE context and culture, offers an empirically informed approach dedicated to UAE social research with some generalisable use.

1.5 Research questions

Chapter-2 (UAE and policing technology context and culture) and chapter-3 (technology and occupational culture – individuals and org) review literature, identify gaps and from these gaps identify potential research questions. The methods chapter (four) then justifies the selection of research questions against possible alternatives. Following Blaikie (2008) the research selects a what, how and why question i.e. moving from description towards identifying changes and then analysing why particular changes are occurring as opposed to paths not travelled. The selected research

questions also relate to fulfilling the research aims; in this case investigating attitudes and usage patterns. Again, noting that Chapter-4 fully justifies the selection of research questions, the following three question structure and guide this research.

RQ-1: What effects does the introduction of body worn cameras have on police officers in Abu Dhabi?

RQ-2: How do police Officers, working in the occupational culture of Abu Dhabi police interpret the introduction of body worn cameras?

RQ-3: Why are these particular interpretations reached and other interpretations discounted?

Underlying the three chosen research questions and many choices, to which Chapter-4 returns. For now, it is worth noting that since the research is exploratory and deeply investigates how culture and context interact with individuals and professional organisation to shape the use and meaning of BWC new technology, the thesis does not explicitly conduct an international comparison. A robust empirical cross-country study is too wide for exploratory research, since extending scope necessarily reduces depth. This decision was guided by advice on comparative studies provided by Yin (2008) and Blaikie (2008). Secondly, it is worth noting here that this research is confined to the perspective of Police Officers and does not attempt to discuss in detail the important governance, accountability and effectiveness issues raised by taking the perspective of either Government and policy-makers or citizens. Again, the justification for this choice is to limit scope, thereby retaining focus.

1.5 Summary of data and method

Research design is guided by Charmaz's (2006) constructed grounded theory, which ideally suits exploratory research. By way of summary, this approach recommends that from a literature review a Framework-1 is created giving structure to data-gathering and analysis, following which an amended Framework-2 emerges as a new theoretical contribution.

The research is interpretivist (Easterby-Smith *et al* 1991; Miles and Huberman 1994) selecting events and action that highlight roles, relationships and responsibilities as providing a plausible narrative and explanation of events (Saunders 2003). Hence in

the tradition of Sztompka (1994) and Kvale (1996), this research constructs what, how and why officers interpret the use and results of BWC for their outlook and practice.

As indicated above, Jennings *et al* (2014) point to a lack of empirical research on BWCs: there is no previous research on their use in an Arabic, Islamic and Gulf context and culture. It is not possible then to use peer-approved definitions and causalities for hypothesis testing in quantitative research. This exploratory research is qualitative.

The research adopts triangulation as recommend by Easterby-Smith *et al* (1991), Gilbert (2008) and Bryman and Bell (2011) as a means of avoiding researcher-bias: in this case two forms of triangulation. Denzin's (1970) proposal to use triangulation in social research amounts to cross-referencing between datasets and cross-referencing between form of data gathering (methodological pluralism such as survey data with interview data). This is the approach adopted here, echoing recommendations in all major social research methods texts. Where multiple viewpoints on a subject give a coherent narrative, this lends credence to (though does not validate) the strength of the narrative.

- Firstly Chapter-6 triangulates between data sets. As Chapter-4 explains and Chapter-5 presents, the research creates three new datasets: interviews with four sets of Police Offices (a local Police Station, a Police Station dealing with foreigners, Prison Guards and a SWOT team). A second dataset is the result of three-months observation of the use of BWC by patrol police in Abu Dhabi and the third a set of video-recorded critical incidents. Translated and transcribed data is shown in Appendices One to Six. NVivo was used in analysis with coding selection and procedures outlined in Chapter-4. This approach is helped by the author's twenty-years experience as a service Police Officer in Sharjah, giving me a rich pre-understanding of Officer's work and the occupational culture.
- Chapter-7 uses a second form of triangulation, in this case between the empirical findings and their interpretation in this research with previous research. This second triangulation usefully helps identify the theoretical contribution of this research and the publication plan (Chapter-8).

Figure-1.1 illustrates how the research questions, literature and data are connected in this research, striving to offer a joined-up view of the research project.

Question	Literature gaps: (Chapters 2 & 3)	Data gathered	Method (Chapter-4)	Presentation (Chapter 5)	Analysis (Chapters 6 & 7)
RQ-1: What effects does BWCs have on Abu Dhabi police officers?	<ul style="list-style-type: none"> Jennings (2014) empirical gap No research in UAE (or Arab or Islamic context) 	<ul style="list-style-type: none"> Four sets of Police Officers Observation of Officer's practice Critical Incidents and BWCs 	<ul style="list-style-type: none"> Semi-structured interviews 3-month Observation Video recording 	<ul style="list-style-type: none"> Structured using Framework-1 Thematic presentation of data 	<ul style="list-style-type: none"> Thematic presentation (using Framework-1)
RQ-2: How do police officers interpret these effects?	<ul style="list-style-type: none"> Ariel (2015); Coudert (2015) most research from Government or citizen stakeholder perspective not Officers 	<ul style="list-style-type: none"> Four sets of Police Officers Previous empirical research: Lynch and Fridell (2014) 	<ul style="list-style-type: none"> Semi-structured interviews 3-month Observation 	<ul style="list-style-type: none"> Structured using Framework-1 Thematic presentation of data 	<ul style="list-style-type: none"> Narrative analysis of Critical Incident video Triangulation between dataset and with earlier research
RQ-3: Why are these particular interpretations reached and others discounted?	<ul style="list-style-type: none"> Vygotsky (1934), Arthur (2008) learning new interpretations always culturally and contextually specific 	<ul style="list-style-type: none"> Government policy documents All above data 	<ul style="list-style-type: none"> Interviews Observation Critical Incident studies 	<ul style="list-style-type: none"> Structured using Framework-1 Thematic presentation of data Cameo critical incident case studies 	<ul style="list-style-type: none"> Thematic analysis using Framework-1 Cross-case data analysis (Yin 2008) Triangulation with earlier research Create Framework-2

Figure-1.1: Connections between questions, literature and data

1.6 Structure and flow

Figure-1.2 illustrates the flow of arguments and construction of the evidence base for a theoretical contribution from this research.

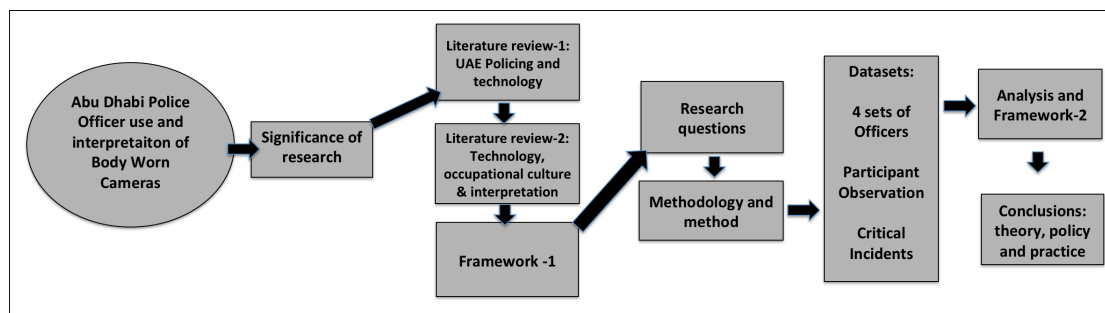


Figure-1.2: Flow of argument in thesis

It is important to note how the research questions are a bridging point between gaps in the literature and the data gathered to answer the research questions; in this the research closely follows Bryman and Bell's (2008) advice. Using framework-1 to structure data-gathering and analysis, following which framework-2 emerges as a theoretical contribution follows Charmaz's (2006) constructed grounded theory approach, which she suggests ideally suits exploratory research.

My research and the thesis follow flow outlined in figure-1.2, though in particular in framing the research questions and designing framework-1 there has been significant iterations backwards and forwards. As will become clear, and following Low and MacMillan's (1988) exhortation for clarity over unit of analysis, my unit of analysis is the body of serving Police Officers in Abu Dhabi.

Chapter-2 examines the history and state-of-the-art of policing in Abu Dhabi and the use of technology it makes – in particular technologies used on-the-beat to gather data about officer's actions and citizen's behaviour. The chapter begins with a summary of Abu Dhabi police development and then explores the wider culture and context in which policing occurs. In examining the on-the-beat technology employed, it reviews previous research on BWCs (for example Bouma *et al* 2015) and briefly examines how their deployment in Abu Dhabi compares and contrasts with other forces. Then the chapter explores the culture and context of Abu Dhabi police at individual and organisational levels and in doing so its accountability and governance with Government and citizen stakeholders. After a brief section summarising dilemmas facing citizens and human rights, the chapter brings together conclusions on policing and BWCs in Abu Dhabi for use in the later framework-1.

Chapter-3 continues to accumulate concepts and causalities relevant to framework-1, in this case by exploring police occupational cultures (Waddington 1999) and the nature of policing as a dynamic profession i.e. how the policing occupation culture alters (Gottschalk 2008). In doing so, literature from services, innovation and learning and integrated with criminology and sociological perspectives relevant to BWC in policing. The paper then reviews and rejects the technology acceptance (TAM) and actor network (ANT; Pinch and Bijker 1987) frameworks as suitable for this analysis and instead builds on the work of Vygotsky (1934) and Arthur's (2008) complexity theory to

prepare a new socio-technology framework for use in analysis. After presenting and justifying this new framework, the chapter concludes by identifying a range of gaps in the literature relevant to the introduction of BWCs, some of which are selected as research questions.

Chapter-4 justifies the epistemological stance taken in this research (constructivist, interpretivist and realist) as Schoenberg and McAuley (2007) propose, then arguing that Charmaz's (2006) constructed grounded theory offers a suitable research design, being built around Glaser and Strauss' (1969) grounded theory. After considering potential research populations (including comparative analysis, policy-makers and citizens) samples from Abu Dhabi police are justified. My approach is purposive sampling as recommended by Miles and Huberman 1994:27), which I consider in Yin's (1994) terms to be '*unusually revelatory*.' Data gathering from semi-structured interviews (Bernard 1988), observation and critical incidents (Hughes *et al* 2004; Pendleton and Chavez (2004) are justified against alternatives and then data gathering approaches justified i.e. interview schedules (see Vito *et al* 2015), observation recording and video recording of critical incidents (see Miller and Salkind 2002). In justifying how data is presented the chapter argues for a thematic presentation of interview and observation data (Sanders and Hannem 2013) and narrative approach (Magretta 2002; Gartner 2007) to critical incident data. A section on data analysis justifies thematic analysis of interviews and observation, using conventional coding techniques (Yin 2003) assisted by NVivo, followed by triangulation with previous research. To simplify evidence-building, I justify an in-case discussion between datasets is included (Chapter-6), followed by an analysis (Chapter-7) triangulating with literature, reflexivity and building framework-2 as a theoretical contribution of what Llewelyn (2003) terms mid-range theory, the nature of its validity and justification of meanings (Burrell and Morgan 1979).

Chapter-5 presents the three datasets as discussed above, carefully referencing the raw (transcribed and translated) data in the appendices; chapters-6 and 7 the in-case discussion (Silverman 1993) and triangulated analysis outlined above. Translation is itself a challenge, since as Broadfoot and Osborn (1993) nuanced meanings can be lost; in this case a great deal of time and care was taken, as Ercikan (1998) recommends avoiding the danger of pre-determined outcomes resulting from superficial translation

of which Birbili (2000) warns. As Following Dubois and Gadde (2002) note it is important to consider whether the conclusions were embedded in the research premises or data. Following this, a conclusions chapter (eight) that answers the research questions, outlines the theoretical and empirical contribution to this research to the fields of literature cited, suggests public policy implications and finally gives a publication plan for the research.

CHAPTER-2 LITERATURE REVIEW 1: UAE AND POLICING TECHNOLOGY

This chapter focuses on the culture and context of Abu Dhabi: the life-world into which the body-worn camera (BWC) is introduced, in addition to scene-setting the chapter identifies from the wider Abu Dhabi culture and context those factors most influential on how Police Officers interpret BWCs. These include a remarkably low crime rate, a culture of privacy drawing the line of privacy around home and family rather than individual actions leading to an acceptance in public places of security by surveillance. Reviewing research on BWCs, the chapter finds that most research is not from a Police Officer perspective and that being grounded in US and UK culture traditional references occupational cultures and police-public relations are alien to Abu Dhabi often delegitimising the police, challenging governance systems and eroding accountability. Thus, the chapter is arguing that the context and culture into which BWCs are introduced in Abu Dhabi is quite different from those referenced in previous research on BWCs. These conclusions inform the following chapter (three) which focuses on research interpreting BWCs at the level of the individual and particular police organisation, at the conclusion of which an analytical framework for the research is presented.

2.1 UAE context

The United Arab Emirates is situated in the Middle East, established on 2nd December 1971 as a federation of seven Gulf States, (Al-Raisi, Amin and Tahir, 2011). Al-Naqeeb (1990) speaks of an *articulated spirit* of commerce in UAE; a history of sea-faring dhow traders, trading imported goods with traditional Bedouin (*badawiyin*), giving rise to trading towns. Trade and its accompanying trait trust are deeply rooted in Emirati culture. After indigenous trade in pearls waned in the 1930s, oil exploration reached fruition in the 1960s (Davidson 2008), firstly in Dubai and then the Falah, Rashid and Margham fields. In recent years the economy has successfully diversified, especially in logistics, financial services and high-value tourism (Ahmed and Alfaki 2016), to become in the words of the *Abu Dhabi Economic Vision 2030* (2008) a *knowledge-based economy*. As Ahmed and Alfaki (2016) note, per capita gross domestic product is now \$69,000 per annum. The International Monetary Fund, noting UAE's stability and legal system, designates it one of the top-twenty countries in which to do business (IMF 2016).

According to the National Bureau of Statistics, between the years of 1975-2005 the UAE experienced a substantial population growth as shown in figure 1 pictured in figure-2.1.

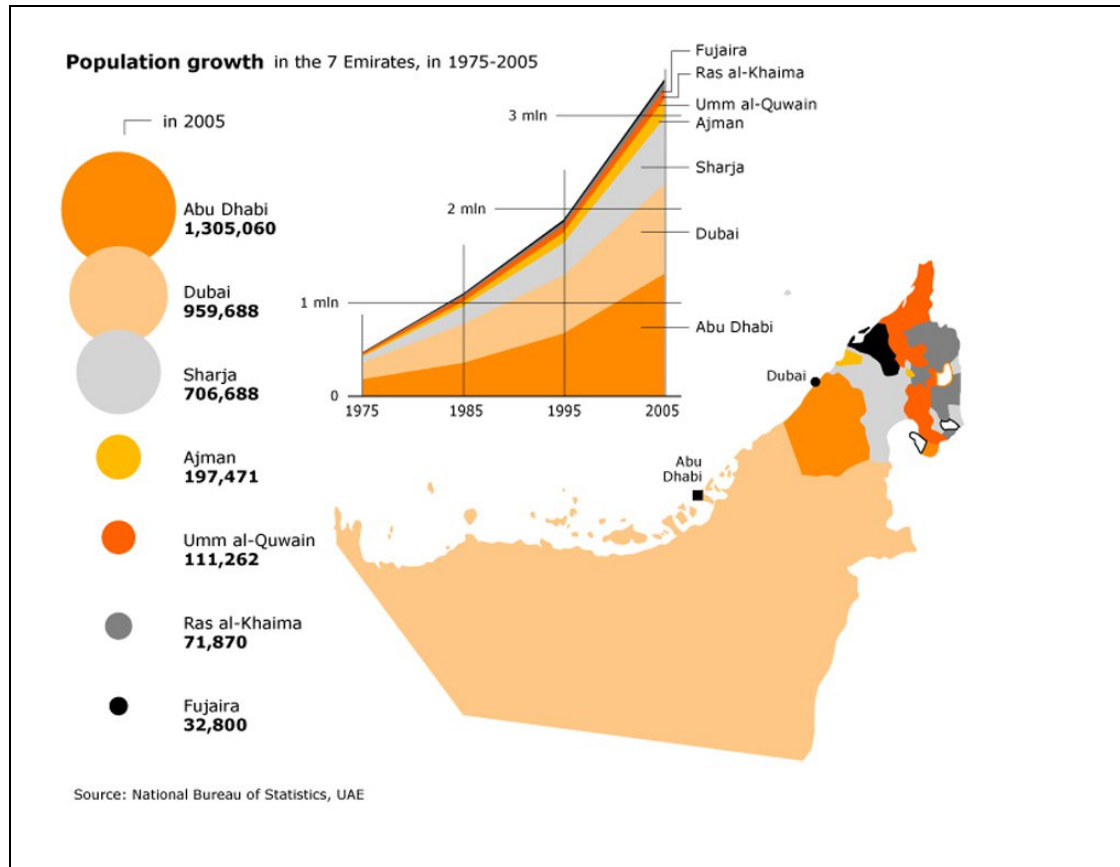


Figure-2.1: Location and population of UAE

In recent years, as a result of economic growth and significant inward migration, UAE's population has grown, as figure-2.2 shows. 1.4 million of the 5-million population are indigenous Emiratis.

2.2 UAE policing: context

This section describes the context in which Abu Dhabi policing occurs and how this context influences the use of BWCs.

Policing Abu Dhabi

Manchester's crime index according to Numbeo (2018) is 55.5 crimes per 100,000 of population, in London the figure is 48; in Abu Dhabi the figure is 15. *The National* (Jan 2018; a Dubai-based newspaper for the Middle East) reports that a survey of 288

capital and major world cities finds that Abu Dhabi has the lowest city crime rate in the world. The newspaper goes on to quote residents saying, *If you want to indulge in crime [in Abu Dhabi], security people will stop you because always we are on security radar and In Abu Dhabi when we see police, we feel safe but, on the contrary, in India mostly we avoid going to police.*” Researchers, such as Yates (2016) have noted the historic low formal crime rate in UAE with disproportionate rates for ex-pats rather than Emirati nationals and Fernando and Jackson (2006) the influence of Islam on creating and maintaining low crime rates, from which UAE seems to benefit. In UAE’s case, as EIP (2012) notes, the relatively large police force (33,893 staff for a 921,000 population in Abu Dhabi, supports high levels of community policing, which they argue also helps keep crime rates low.


 <div> UNITED ARAB EMIRATES دولة الإمارات العربية المتحدة NATIONAL BUREAU OF STATISTICS المركز الوطني للإحصاء </div>			
National Population by Emirate and Sex (2010 mid year estimates)			
Emirate	Male	Female	Total
Abu Dhabi	204,108	200,438	404,546
Dubai	84,245	83,784	168,029
Sharjah	78,818	74,547	153,365
Ajman	21,600	20,586	42,186
Umm Al-Quwain	8,671	8,811	17,482
Ras Al Khaimah	49,181	48,348	97,529
Fujairah	32,486	32,374	64,860
Total	479,109	468,888	947,997
Population by Nationality (National -Non National) and Sex (2010 mid year estimates)			
Nationality	Male	Female	Total
National	479,109	468,888	947,997
Non - National	5,682,711	1,633,362	7,316,073
Total	6,161,820	2,102,250	8,264,070
Source: National Bureau of Statistics.			

Figure-2.2: UAE Government statistics showing population growth

As Ballantyne (2000) notes, the UAE’s penal code was introduced in 1972 and is recognisable to western jurists since Sharia law is reserved for special circumstances. There are crimes within the code reflecting UAE’s status as an Islamic Republic; these include blasphemy, apostasy and alcohol abuse. Mainly, however, the criminal code enforced by the police in UAE consists of felony, misdemeanours and minor offences

recognisable in UK law. Legal processes too similarly enshrine a rule of law, prohibiting abuse of person or property (Article-3), malicious accusation (Article-25) and guaranteeing legal access and representation (Article-4). In short, the law police Officers enforce in UAE is in the main similar to that in the UK. Similar problems characterise both contexts, such as drug-related and people-trafficking crime. There are important aspects of crime in UAE. Al Kitbi (2010) and Amir (2007) discuss the lack of a delinquency sub-culture amongst Emiratis, arguing that traditional social structures remain strong (family, mosque) despite rapid socio-economic change. Read and Rogers (2011) suggest this is in part due to the emphasis on community policing acting to prevent youth crime in UAE. Most of the minor crimes such as pick-pocketing, minor theft and recreational drugs, a recent Abu Dhabi crime report claims (UAE 2017), occur in the migrant community and go unreported. Crime in Abu Dhabi by Emiratis is often economic, such as asset misappropriation, according to PWC (2017), who also note that in this case half of crimes are reported to the police and that levels of economic crime are two-thirds of the global average. Overall, the Global Competitiveness Report (2017-2018) finds that of 168 countries, UAE ranks 4th for low cost of crime to business, 5th for the reliability of police officers and 5th for the efficiency for the justice system. The UAE Government's *Justice and Crime Vision 2021*, tracks performance variables such as police reliability, average response time, road traffic death, judicial system efficiency and sense of security and has a target of becoming the safest country in the world by 2021.

Apart from the Islamic culture and community policing, another reason for low crime in UAE is design of the physical environment. As Ekblom *et al* (2013) note, as a young country UAE has been able to consciously design public space and people movement. Courtyard housing with high walls draw clear boundaries between public and private space, guided by seven principles of safer places: (1) access and movement, (2) surveillance, (3) structure, (4) ownership, (5) physical protection, (6) activity, and (7) management and maintenance. Principle (2) *security through surveillance* appears especially important to the present study of BWCs. Interestingly, from Sennett's (2018) discussion on what constitutes a smart city, to which he answers openness to ideas, interactivity and connectivity, ubiquitous surveillance in UAE is accepted and even applauded by Emiratis according to Ekblom *et al* (2013); openness and *security through surveillance* do not appear to conflict. Stress points between Emirati citizens and police

revolve around any transgressions of Islamic codes in dealing with women or Arabic codes entering private homes. A wider span of stress-points occurs between migrants and UAE police, revolving around un-Islamic behaviour or breaches of ‘good-behaviour’ clauses in work contracts, the breach of which migrants know often results in immediate justice and deportation.

The nature of the UAE policing is in some respects similar to the UK (policing by consent) and in other ways dissimilar. In 2003, Lt. General HH Sheikh Saif bin Zayed AL Nahyan, Deputy Prime Minister and Minister of Interior instituted the Abu Dhabi Community Police Force covering the whole island. From the beginning policing in Abu Dhabi has been rooted in community engagement; a model lauded by the United Nations in 2008 as *a role model that should be emulated by other countries* (UN 2017). Officers (and volunteer Community Support Officers) frequently patrol all neighbourhoods, making themselves available to citizens, schools and community groups. Regular school visits and discussion are seen as important preventative work. Officers participate in National Day and Eid festivals. The Institute of Community Police and Policing Sciences in Abu Dhabi City emphasises community engagement in its training activities. In summary, part of the culture of policing in Abu Dhabi is a deep engagement with the community and schools.

Police services feature prominently on the Government e-services portal (e-services portal 2018) and police’s own portal (UAE Police 2018) provides digital and analogue access along with a wide range of service advice. It seems fair to suggest that Abu Dhabi’s police are service and citizen-centred. They are also technophiles as the early adoption of robotic officers, with recognition cameras, reveals (Robocop 2018). Abu Dhabi is completely monitored by cameras, which appears from many citizens accepted (see *UAE Justice and Vision* 2021), often spoken about as *security through surveillance*, who often comments that monitoring enhances their feeling of security. It is in this technophile context and culture of community policing that body worn cameras were first introduced as a pilot in 2012.

BWCs and Abu Dhabi Police

The first BWCs were introduced into Abu Dhabi policing as a trial in 2012; after which trailing was intermittent until following the 2015 shooting in Fergus and wide diffusion

in the US, BWCs became a permanent part of the technology used by Abu Dhabi's police. There was no formal training for using BWCs; instead the leaflet (reproduced in Appendix) drawn up by the CID (Visualisation section) was distributed to all Stations. Unlike some BWCs (China reference) the AXON BWCs introduced are front-facing (not 360-degree scope) and have no facility for Police Officers to review or edit, with only an on/off switch. Police Officers were asked to take a camera from the dock at the start of shift, switch it on and return it to the dock at the end of shift.

It is important to note that Abu Dhabi Police Patrol Officers are male only, though the Stations are mixed-gender. Hence the potential bias in this research that interviews with Police Officers with BWC experience are all men. The usual practice in Abu Dhabi is that if the police are called to an incident involving a woman then a female Police Officer is called from the Station to attend. Only in dangerous situation are male officers empowered to restrain or search women citizens. It is normal procedure for female police officer to accompany a male Officer when called to an incident (the woman takes the back seat, as befits Islamic etiquette). Unlike some Islamic countries, women in UAE, like western women, go outside unaccompanied to shop or other leisure activities, an Islamic etiquette. Social Support Centre Officers consist of two men and two women, who are armed and wear body armour (two of these women feature in interviews below). To avoid misconceptions, it is worth noting that around 8% of promoted Officers in Abu Dhabi Police are women (92 Officers), joining the Government Ministers and Judges who are also women.

Upon completion of Patrol shift, the Officers return the BWC to its dock (all BWCs are coded by Officer identity). In the subsequent report, the Police Officer will draw attention to the time of any incident, enabling CID to review the video footage. Only the Station Manager can give others permission to view the footage, this includes Police Officers who may wish to check details as they prepare their report. All BWC footage is stored behind encryption walls on Police servers. Should an incident result in charges; a Court can ask to view BWC footage.

A minor technical point is worth noting here. Police Officers report that the BWC is sometimes accidentally switched off when they put on their seat belt. To avoid this, often Officers take off the BWC, placing it on the Patrol car dashboard. This has led

in a few cases to Officers attending incidents having forgotten to put the BWC back on. These cases are few and exceptional (unlike the US case where some 50% of Officers turn BWCs off), as evidence later will show. Research by Aishwariya *et al* (2017) illustrates how this and other weaknesses in BWC design are now be addressed by manufacturers.

2.3 Emirati culture and police service

All societies inherit frameworks of thinking, predispositions, language and metaphoric thinking constituting a culture; more accurately cultures – since within societies and individual's contradictory is discernible (Jenks 1993). Since there are no objective meaning to social action, as Harvey (1994) argues, there can be no simple 'list' or strengths of culture and certainly not possible to erect universal human characteristics as Hofstede (1980) does, however many additional characteristics others may add (Bond 1993; Minkov and Blagoev 2012). Here culture is used in Bourdieu's (1977) sense; of *a matrix of perceptions, appreciations, and actions* that can explain *diversified tasks* - it is the *social glue* that everyday actions and decisions serve to reproduce (Bourdieu 1984). In institutional terms, for Veblen, who was concerned to challenge biological conditioning and social Darwinism, culture is *settled habits of thought common to the generality of men* (Veblen (1919:239; he may today have de-gendered his language). Cultural reproduction features stability and change, as Bourdieu (1977) suggests,

Because the habitus is an endless capacity to engender products -thoughts, perceptions, expressions, actions - whose limits are set by the historically and socially situated conditions of its production, the conditioning, and conditional freedom it secures is as remote from a creation of unpredictable novelty as it is from a simple mechanical reproduction of the initial conditioning.

Expo-2020 is a good UAE example; an already internationalised culture is strengthening its view of the world and UAE's place in it: in Arabic more *worlding*. This section is not intended to provide a tourist summary of UAE's culture, rather to identify aspects of the culture important to society's view of policing and the police's view of society, and therefore the technology used in policing.

As mentioned in the Introduction, UAE is a rich country with a low rate of crime (Davidson 2009). Stratification of Emirati society consists of a small elite of ruling

families and a small number of recently urbanised Bedouin farmers: the bulk of indigenous citizens (*Al-Muwateneen*) are either trading business-people or public servants – all of whom enjoy high living standards. Migrants (*Al-Wafedeen*) stay usually for a short-term and in general live separately. Emirati men's clothing (*kandoura* and *ghutra*) and women's *hijab* and *abayah* symbolise citizenry. Dynastic rule is uncontroversial (Jones 2017) and even lauded as providing clear and rapid decision-taking: Lew Kuan Yew and Singapore is an oft-cited exemplar, with countries such as Norway also often exemplifying small yet successful. Emiratis like all Muslims value education and as Pinto (2012) notes invest heavily in life-long knowledge acquisition making a credentialist society. A large proportion of Emiratis work in the public sector leading to a respect for public services (including the police) and pride in providing services superior to competitors (traditionally Iran and Saudi Arabia, though increasingly the US and UK). This respect noted by Alhashmi *et al* (2017) is also reflected in low police turnover; officers facing stress believe they receive organisational support and have low intention to leave. In part, and relevant to the present study, low turnover, Abdulla *et al* (2010) argue in UAE police, is also due to high levels of autonomy; they go on to contrast job satisfaction from team bonding as opposed to more individualistic notions of satisfaction in western countries.

Emirati women successfully achieve high educational standards (Soffan 2016), the relatively low labour market participation being explained by choice, rather than religion: those women choosing to work (often in professions and business) do so; others adopt a traditional choice of full-time mother. Bristol-Rhys (2016) suggests that women and men seem content to be socially and politically conservative yet radical and innovative in business; this includes gender segregated schooling. The Marriage Fund and housing grants help support women having the motherhood choice. Emirati children, including teenagers act firmly under family guidance (and police and religious influence from schools): there are few disengaged teenagers, as Al Kitbi (2010) note.

Poetic traditions are strong in Bedouin culture, celebrating as Hurriez (2011) and Naffis-Sahely (2017) show friendship, social solidarity and harmony. Unlike Saudis, Emiratis are 'touchy' people: they hug and kiss symbolising trust. This trust transcends to other cultures, as Acuto (2014) Emiratis are open to and value learning across cultures.

In summary, UAE's Islamic culture, well-resourced community policing and stability of social structures such as the family are perhaps contributory to the low crime rate. Emirati crime is often economic, petty crime mainly confined to migrant communities. Configuration of public space and seeming acceptance of *security through surveillance* support the conclusion of international ranking agencies and researchers that UAE enjoys an internationally low crime rate. Investigations of police corruption in UAE, such as Al-Muhairi (2008) find low and declining levels, albeit that any corruption is problematic and in UAE especially concerns traffic offences. Equally serious are media reports (BBC 2017) of excessive violence against the migrant community.

2.4 Police service systems improvements

Reducing crime is a public good, adding public value and Abu Dhabi police is a project driven organisation striving to improve public value. Many projects are social rather than technological. A Captain who led a recent Crime Reduction Project points out, lowering crime rates leaves police time available for increased preventative work. High crime rates are costly both to the police and society (Motorola 2015). A Customer Service Improvement project led by a Major aimed to improve customer service in Abu Dhabi police stations following falling satisfaction levels and complaints. The project mapped service systems in 20 police stations, 9 checkpoints and 10 traffic centres; suggested improvements leading to uplift to an 86% satisfaction rate, which Motorola (2015) ranked as amongst the best twenty-five programmes in the world. Of course, not all innovations or performance improvements depend on 'hard' technology; many are the result of organisational change and improved service systems. Importantly, Ellis *et al* (2015) note that effective use of data from BWCs poses major issues for the interoperability of police databases and integration of information systems, without which the benefits to efficiency and effectiveness of BWCs may be limited.

2.5 Previous research on BWCs

This section firstly summarises industrial research on BWCs and then reviews academic research.

Industry research on BWCs

TASER International was founded in 1993 in Scottsdale, Arizona and changed its name to AXON in 2017: it is a major global supplier of law enforcement technologies including stun guns, evidence management systems, in-vehicle video systems and BWCs. It has assets of US\$ 327,607,000 (September 2017; <https://uk.axon.com>) and sells to over 100 countries, including UAE. As an industry leader AXON undertakes significant research on the use and benefits of its products, including BWCs.

Taser International (2014) announced the purchase by Droco Tactical Trading LLC in Abu Dhabi BWCs in UAE and in June 2016 held a Conference of users in Phoenix, Arizona bringing together the members of the law enforcement community and technology developers under the strapline of making policing more efficient and effective using technologies, including BWCs. Their stated aim was to use feedback from practice to improve the technology.

Taser stated that at mid-2012 they had sold 760,000 policing technology products to 8,000 law enforcement and military agencies in 107 countries now used by law enforcement officers, military, professional security providers, personal protection providers, and correctional protection officers. Their products aim to reduce risks to law enforcers and the public by incapacitating offenders and recording and processing evidence aiming to reduce crime rates and more successfully prosecute offenders.

AXON claims that 95% of agencies deploying BWCs use their products, 110,000 of which have been sold. The company has said, *When actions are being recorded, truth leads. And when officer and suspect interactions are available for immediate review, erroneous allegations are silenced* (Taser 2014). They suggest that AXON BWCs have led to an 87.5% drop in complaints against officer in California area, Rialto, and Pittsburgh; improving services with a lowering of costs of investigation and prosecution. AXON offers training services on the use of BWCs.

BWC academic research

Police services, like other public services have differential capabilities to innovate and achieve performance targets. Maguire (2003) shows performance is affected by height of hierarchy, degree of professionalism, size, budget and innovativeness. However, this raises Neely's (2007) question: what is performance and how to measure it? The

point being that as Nowacki (2016) argues, it is impossible to isolate BWCs as a variable when invariably their introduction occurs in the midst of other changes. For example, Sandhu (2017) suggests that most officers support BWCs believing them to provide protection against complains and when wearing BWCs many alter their behaviour – creating a self-fulfilling prophecy. Since the 1934 Hawthorn experiments innovation studies have recognised this bias. He goes on to suggest that BWC are adopted by police forces more prone to early innovation and those most concerned to maintain public legitimacy: again, suggesting that all research on BWCs needs to be qualified by signalling potential bias.

The UK took the lead in introducing BWCs announcing policies in 2007 and rolling-out across 42 forces in 2010 (Morrow 2016), however as Peck (2015) points out, only in the aftermath of the Ferguson shooting of Michael Brown in Missouri when federal funding for 50,000 BWC was made available, did academic debate expand (Pagliarella 2016). Early research into BWCs, focused primarily on US-oriented policing issues i.e. race and police legitimacy. Academic support for BWCs came from a police use perspective (Jennings *et al* 2015; Smykla *et al* 2015). Owens (2014) research found that officers perceived BWCs useful in gathering evidence and while less likely to make arrests, Officers were more likely to press charges. Roy's (2014) study recommending BWCs found that fewer citizens make complaints against the police. Ready and Young (2015) and Hedberg *et al* (2016) found a fall in arrests and use of stop and search, with Smykla (2015) suggesting that police over-reactions to incidents declined. Jennings *et al* (2015) in their Orlando study framed BWCs as the logical extension of closed-circuit television, dashboard video and GPS; they did note that in 25% of cases officers suggested that BWCs altered their own behaviour. In summary, most of the post-Ferguson academic research on BWCs arrives positive findings, however, it should be noted that this research is in the US context in which police legitimacy and race issues predominate in a way not necessarily found her contexts.

Not all BWC academic research findings are positive. Ford (2015) states bluntly that race and legitimacy are the problem in the US and there is no technological solution to a social problem. Other researchers in the US (Gaub *et al* 2016; Hedberg *et al* (2016; Katz *et al* 2015; White 2014; Morrow *et al* 2016) conclude that though privacy and cost are issues with BWCs, the main issue is the occupational culture into which they are

introduced. Morrow (2016) found BWCs associated with an increase in arrests, disputing earlier evidence. Several researchers (for example Taylor 2016) suggest that such is the level of distrust in the US that citizens are wary of the manipulation of images to suit police interests. Other issues arising from research include protection of vulnerable people from recording, who has viewing rights and (after the Wall Street Occupy movement) whether citizens have the same right to video the police as the police have to video the public: *Photography is Not a Crime* (PINAC) is an example. In a major study of police practice around the heuristics employed to quickly respond to serious incidents, notably Mears *et al* (2017) made no mention of any value from BWCs. In summary, there is a stream of academic research reaching more negative conclusions in relation to BWCs, again this is primarily US-based research; also, the research does not adopt the officer's perspective – most is focused on policing policy.

An important issue often neglected in Young and Ready's (2016) work is the finding that occupational culture influences the activation of BWCs. Even volunteer officers only activated BWCs in 67% of incidents (non-volunteers were 51%) a figure rising slightly they suggest as officers become familiar with the technology. If a major reason for BWC adoption as Hedberg *et al* (2017) argue is procedural justice (the other reason being deterrence) then non-compliance with activation is a major problem.

Have BWCs post-Ferguson restored legitimacy in the US as Wasserman (2014) argues was the intent? Culhane *et al's* (2016) research amongst citizens suggests not, especially where officers have alternatives to shooting (such as being instructed not to shoot and await backup). Legitimacy in the eyes of racial minorities in the US (and perhaps other minorities) is a deeper question than simple technology can resolve.

Research outside of the US is mainly limited to the UK as an early-adopter. Goodhall's (2007) study in Plymouth, UK found that the 50 BWCs, reduced complaints against the police, and improved evidence quality and the prosecution rate. In Scotland (Renfrewshire and Aberdeen; 38 and 18 BWCs) ODS Consulting (2011) found that Officers supported BWC since the enhanced their ability to counter citizens' complaints. Owens *et al* 2014 finds similar results in Essex. This research (a) pays more attention to the officer's perspective and (b) occurs in a context of consensual policing without the toxic race issues, which influence US research.

There is a limited amount of research on BWCs from the officer's perspective. Kyle (2016) though mainly concerned with police legitimacy finds that most officers approve of BWCs viewing them as a logical extension from CCTV and in-car dashboard video into mobile technology. Echoing generations of research on innovation showing that resistance precedes acceptance, Katz (2015) finds that officer approval rises with familiarity. Alternatively, Headley *et al* (2017) suggests that approval by officers falls as they realise BWCs will not automatically result in reduced citizen complaints or (albeit rarely) their need to use force. Kyle *et al*'s (2017) survey of 201 Officers' attitudes in two US states interestingly finds that higher ranking officers and women officers show most approval of BWCs as do lower Officers with a high sense of justice and proclivity towards innovation and organisational change. The former points from this research are interesting for the current UAE study to follow-up.

Brucato (2015) expresses an accountability concern amongst officers that BWCs encourage citizens to use smartphones to record police actions: cameras are a two-way street. One of the few researchers to focus on officer's perceptions of BWCs, Sandhu's (2017) work in Edmonton, Canada finds that most Officers believe BWCs give them protection against complaints, though officers object to citizens recording their actions on video. No study of BWCs researches the Arab or Islamic context, a gap my research addresses.

Reviewing industry and academic research into BWCs, this section notes their rapid diffusion internationally. Academic research is mainly grounded in US context and culture where Policing's legitimacy is challenged (racism in occupational cultures) and mainly from a policy and citizen privacy perspective, rather than a police officer viewpoint, the perspective of this research. Research notes important points including non-activation of BWCs by large proportions of officers and suggestions that officer behaviour alters when wearing BWCs. It notes that accountability is a two-way process and that Officers in US and UK research view BWCs ambiguously. The next section explores the interpretative frame of public space in Abu Dhabi.

2.6 BWCs and Abu Dhabi's public space

As indicated in section 2.5 Abu Dhabi Police use AXON BWCs. These are interoperable with Motorola's MotoLocator software, which is also used. High definition video footage is streamed from the BWC to be viewable by senior officers where necessary, allowing them to remotely direct officers at an incident; the system also stores and retrieves footage; searched by date, officer or place. BWCs have a range of capabilities beyond image and audio capture including facial recognition, speed tracking of vehicles and automatic number plate identification. Motorola are working towards adding capability to read fingerprints, National IDs, and electronic passports. As a digital technology they eliminate human error in recording data such as time, place and event sequencing for in this case police-public interactions, critical incidents and arrests (see IRIS 2014; Ellis *et al* 2017). In police work accurate recording of reports and testimony is particularly important since in future investigations or prosecutions it may be scrutinised by adversarial lawyers. In the case of traffic crimes and accident scenes, the BWC captures evidence in real-time i.e. before tampering, deterioration or change. None of this obviates the necessity for written reports, since unsubstantiated video evidence is inadmissible in court and testimony must be a sworn statement by a police officer.

Abu Dhabi is new public space with the benefit therefore of planned rather than organic and unplanned growth over time, found in older cities. Planning is undertaken by the Abu Dhabi Urban Planning Council (UPC), for whom security and safety are major goals embedded in its eight principles guiding development. These include: Principle-1 access and connectivity; Principle-4 surveillance; Principle-7 public image; and Principle-8 adaptability (UPC 2015). Note how integrated policing activities are with planning and development principles, in particular the principle of surveillance, which police officers believe (with some validity if Ekblom *et al*'s 2013 research is noted) is widely supported by the citizenry as a guarantor of personal accountability, avoiding the anonymity characterising large cities and retaining aspects of village life.

All planning and development proposals in Abu Dhabi must comply with the UPC (2015) principles again unlike many cities that developed an industrial base in a pre-regulated era. Freedom from fear in a sustainable and secure environment is part of UAE's *Vision 2030* "master-plan;" to become a global knowledge-hub city. Unlike

many cities, therefore, the police are involved in planning applications assessing risk of crime by eliminating or reducing undetected criminal movement, isolated targets or victims and spaces favourable to crime (OSAC 2014). An additional consideration in Abu Dhabi, which is multicultural and religious, is non-intrusion into religious practices by all faiths and non-interference in families and homeliness (Crabtree, 2007).

An important influence on families and homeliness in Abu Dhabi is climate. During the summer time, public places including plazas and parks are quiet and are not frequented. In the heat people prefer to drive rather than walk: there are narrow pathways providing shade and wide roadways allowing breeze. Unlike numerous modern city-spaces that ‘die’ at evenings and weekends (Castells and Hall 1994; Sassen 2006) making them prone to anti-social behaviour and crime, the structure of Abu Dhabi lends itself to security. While many countries use CCTV to monitor roads and places of social gathering, in Abu Dhabi CCTV monitors the whole island. An alternative view of New York by Berman (2010) speaks of the destruction of communal neighbourhoods and replacement by Expressways, modern buildings and transport; what Jacobs in the *The Death and Life of Great American cities* called “kill the street.”

In summary, the key point of this section of literature is that Abu Dhabi citizens are comfortable in a world that draws the line between private and public differently than Europe. This is not the resigned compliance of Soviet or Third Reich citizens or panopticon inmates. Abu Dhabi’s surveillance is socially accepted and applauded; not the false affixation of ‘socially’ to accepted (1999:37) criticises; but instead a surveillance of the public domain and sanctity of the private akin to Habermas’ (1994:19) idea that *Civil society came into existence as the corollary of a depersonalised state authority*. Emiratis see the state and anti-social forces restricted, not society. Although new, Abu Dhabi space to Emiratis appears, in Goodhart’s (2017) terms, somewhere space; there is a belonging; one aspect of the *comfort-giving symbolism* (Cooper 2007) are the surveillance cameras, ensuring public space security. To return to Latour (1999): *there is something invisible that weighs on all of us that is more solid than steel and yet so incredibly labile*; for Emirati Abu Dhabi citizens, part of this *something* is arguably normalisation of surveillance. As a small open country, UAE is seeking to replace its current conduit to international connectivity (oil) by advanced technologies (the health, finance, cultural, software, life-science and non-

carbon technologies targeted in *Vision 2030*). In this sense, they reject Turkle's (2011) critique of technology creating alienation and reduced social interactions: Emiratis are seeking to use technology as a new vehicle to enhance their global interactions.

Since 1945 countries such as Japan, South Korea, Taiwanese China and now Mainland China have overcome the *burden of backwardness* (Bouckaert 2007) not by following a transition path of intermediate technology 3.2 (Gerschenkron 1966) but rather what Johnson (1982), Woo-Cummings (1991) and Sassen (2017) call the *development state*. This is the idea that national integrity is achieved by close social solidarity around development goals, involving internationalisation led by an expert economic bureaucracy temporarily sacrificing (western) democratic goals to privilege economic gains. This is a model many Emiratis recognise, with the added condition that in a Muslim society, equity and social solidarity are deeply embedded. The development state vision is UAE's way of combining western technology with traditional Islamic values to create a sustainable future. As Rodik (2017) points out, most developing countries face a trilemma: only two of three goals are possible: globalisation, growth or democracy. Emiratis would argue that the Islamic nature of their governances resolves the trilemma: they enjoy all three, though outsiders may question if a monarchy is democratic.

There is an argument that global rather than national governances systems are now exceptionalist (Giddens 1998). Detailed appreciation of this argument is beyond the scope of this thesis. It is worth noting that Sassen (2015) disputes the argument suggesting that nation states remain the locus of international agency. Chang (2005) suggests that there are new global governances set up to prevent new members by throwing away the ladder previously used to develop.

If these perspectives are an accurate portrayal then adopting BWCs (and other advanced technologies) does not require justification: a modern police force using technologies found in comparator countries (i.e. developed countries) is expected.

Government BWC decision processes

UAE is a hereditary Sheikdom using oil revenues and economic diversification to achieve a high standard of living, which *Vision 2030* aims to make sustainable largely

through adopting and exploiting advanced technologies. UAE's transition from poor country to rich country is quite different from countries without natural resources – it has its own investment capital, which Emiratis expect to be used in adopting advanced technologies. They look askance at oil-funded opulent conspicuous consumption as gauche: wasting a one-off natural resource opportunity. Technophilia is expected of Abu Dhabi's Sheikh Government and its benefits shared equally amongst the clan-groups and benefits distributed. Technophilic decisions are part of UAE's governance system resulting in symbolic interactions between citizens (Bulmer 1969; Farganis 2008), Government (and in this case) police officers, accepting and celebrating the country's status as a user of the most advanced technologies – an isomorphic imitation: police as a social group in UAE using BWCs visible and understood by citizens are enacting symbolisms that are appreciated and lauded.

US adoption of BWCs was a top-down response to a crisis (Ferguson); a technology answer to the social problem Nesbary (2001): (a) a perceived racist police occupational culture de-legitimising the police in the eyes of the black community (Carson and Armstrong 1994; Brown 1997:30), and (b) a longer term de-legitimacy of the police as a 'public good' in the richer white community who increasingly turn to private security (Armstrong 1994) or gated communities and alarms (Baldauf 1999). In the UK as London (2013) makes clear, BWC were also a top-down Government decision, in this case to reduce police numbers and costs. Perceived reasons for the top-down decision on BWCs in the UAE were thus quite different from comparator countries; the UAE was enhancing *security by surveillance*, Lyon and Wood's (2012:3) terminology. If a technological habitus predominated in the US and a socio-economic habitus in the UK, from a UAE Police Officer perspective the Government's BWC decision, in Clarke and Star's (2008) was a social expectation (technophilia), with the technological reinforcing social attitudes (acceptance of *security by surveillance*). That the BWC decision enhanced remote management and widened senior officer's span of control as Hughes and Jackson (2004: 70) note and required upskilling by Officers (Hannem 2013) was simply accepted by UAE Police Officers as part of their social compact.

To summarise, the decision of the UAE Government to introduce BWCs can be viewed as legitimating its role as technophilic moderniser, strengthening its accountability (expectation by Police and citizens) to deliver *security by surveillance*. That the

decision was the result of top-down governances and that it resulted in some governance changes within Police management structures, seems uncontroversial in both cases. However, evidencing this interpretation remains a goal of this research.

Privacy as a human right

UAE is a signatory to the UN's Universal Declaration of Human rights, yet has been criticised for breaches (www.hrw.org). Researchers increasingly recognise that 'rights' is a problematic concept with ethnocentric meanings (Lyon and Wood 2012) and 'universal' too blunt an instrument to cross cultural boundaries (Hammerich and Lewis 2013). For example, while lauding the UDHR Emiratis in their practiced moral code are more likely to reference Qu'ranic teaching and family responsibilities. As noted below, Emiratis support surveillance, public/private borderline differently. Foucault's (1975) panopticon less disturbing when privacy is protected by trusted religious and state institutions. Most Emiratis, view providing lucrative work to temporary migrants based on formally agreed contracts as giving rights to people otherwise bereft of them (UAE, 2017, *Crime and Safety Report*).

This Islamic philosophical tradition does not struggle like the Greek tradition to define virtue and transpose it into ethics; Avicenna (Gutas 2014, al-Kindi and al-Ghazali (Adamson 2016) accepted, as do most Emiratis, that the Qu'ran answers these questions. There is no tradition of *communicative action* (Habermas 1986) acting as ethical guardian. UAE traditions are closer to Foucault's (1985) *governmentality* i.e. autonomous individuals, relating to family and clan, acting responsibly: as Dean (1999) argues, a good state reproduces people of this suitable rationality, who in turn support the state. This accords with the Bedouin tradition of self-reliance.

For Emiratis then, the question is not *if* surveillance, it is does the surveillance create security, whether gathered peripatetic data gathering appears, despite Bouma *et al*'s argument, not to make a difference. Emiratis value their privacy and would object to intrusions: the boundary, however, is the home and family and does not include actions in the street. As Bambauer (2013) notes, negotiating this boundary depends upon trust unlike Winston Smith who's rejection of Big Brother arose from lack of trust (Orwell 1949). Though US citizens mistrust their politicians, as Steffoff (2011) find, they trust the constitution as a guarantor of privacy (even though the word is not mentioned) and

whereas FBI (2013) notes, state agencies monitor and gather information about whoever they please under the auspices of the war on terror. Indeed, Langheinrich (2001:138) points out, few aspects of life are secluded from digital footprint, the use of which Standing (2016) is corrupting capitalism in the US in the form of monopoly profits.

Emiratis then resolve their privacy/security dilemma differently than western citizens. However, this does not resolve all issues. Emirati values prevail over those of migrants leading to potential difficulties (for migrants). As Allen and Solove (2009) note, issues of data ownership and access are still being resolved. What are the implications for the police of operating cameras in a Muslim society protective of women's persona? Brey's (2005) argument that paradoxically giving greater control to technology (BWCs) enhances citizen's control appears to align with the perceptions of UAE citizens.

Wearing BWC appears to add to the legitimacy of police in UAE, the degree to which they add to the police's self-image will be clarified by this research. In particular, is Russiano *et al's* (2005) argument that BWC improve police behaviour valid and Harris's point that BWCs reduce the use of force? Finally, is it the case that BWC, as McMullen (2005) argues improves the quality of evidence in the criminal justice system?

Privacy is an important issue in UAE's governances, however the boundary is drawn at the family and home not individual actions in the street. Hence, in police-public interactions in UAE, BWCs appear to enhance rather than detract from police legitimacy; echoing Ellis *et al's* findings in Hampshire, England. The extent to which accountability is effects, in the minds of police officers, is reserved for comment later in this research.

BWCs transferring technology and risk

Every technology brings with it risks and these can become amplified when the technology is transferred internationally. The London Assembly (2013) report on policing technology highlights some of these dependencies, pointing out that the wider the range of interoperability the more fragile the system and unjustified the dependency.

Using AXON BWCs, Motorola's MotoLocator software, and Google databases on Chinese made computers accessing a Huawei Internet system suggests technological risk and potential system unreliability. As Sanders and Hannem (2013) a more basic problem might be reliance on technology as an alternative to relating to people, potentially reducing consensual and legitimacy. This is especially so if the technology is making decisions hidden in algorithms based on inaccurate data or generic profiling. In UAE's case the legitimacy of the police rests in part on the low crime rate (a cultural phenomena) and active interaction with people (street presence, school visits, community participation). According to Mathiesen (1997) society is already in danger of synopticism, where the many watch the few; replacing physical police-public interactions with viewer-policing, is perhaps the main risk from BWC (and drone-cameras). Passivity either by citizens or police as Putnam (1997) argues can erode social capital and networks: an educated, alert and active citizenry and police are necessary to deliver consensual policing. An inactive citizenry seems unlikely in society that is deeply observant of religion, technophile and rapidly developing new institutions, such as UAE. Change brings its own issues. Mernissi (2011) shows that informalisation of gender roles (in Morocco) lead to new behavioural interactions between males and females. How will this develop in UAE is not the subject of this research.

This research investigates from the police officer's viewpoint how well the BWC systems are operating in UAE and if officers believe it has enhanced their legitimacy and how it may have impacting their accountability. These points connect closely with issues of individual officer/police organisation interaction i.e. occupational culture, which is the subject of discussion below.

To summarise, this section began by selecting four areas in which BWCs might affect police governance, legitimacy and accountability. It has been argued that UAE is a technophilic society readily adopting new technologies as a means of repositioning itself into an elite group of developed countries. Using the development state argument and references UAE's Muslim heritage, the section argues that adopting BWCs increases police legitimacy and cements wider governance arrangements. *Security by surveillance* appears accepted governance by Government, citizens and police with the shift from fixed surveillance to mobile relatively uncontroversial. Research results will

reveal to what degree this argument is valid. Arguing that the borderline between private and public is differently drawn in UAE from western countries as a result of its Islamic heritage further suggests that for police officers and citizens BWCs are legitimate, perhaps especially so when the rationale for their introduction was modernisation and not the illegitimacy of policing (US) or cost-savings (UK). While all technology, especially transfer technologies, come with technical risk, UAE appears less in danger of becoming a *viewer society* than other countries because its heritage is one of active engagement.

From a wider perspective, it is interesting how UAE is experimenting with governance forms, for example in appointing a Minister of State for Tolerance (overseeing anti-discrimination work) and a Minister of State for Happiness (overseeing equity and social development metrics and policies), see BBC (2017). The state in UAE is here stepping outside of conventional governance approaches and may well do so in relation to police governance in the future.

2.7 Chapter summary

The purpose of this chapter was to critically review previous research relevant to the use of BWCs in UAE, focusing on UAE's context and culture, preparing for the following chapter-3, which analyses literature relevant to individual Police Officers and their Police organisation. The combined result from both chapters will be to create an analytical framework with which to structure data gathering, presentation and analysis. This framework will then itself be subject to critique and revision to take account of the empirical findings from this research. Figure-2.3 brings together the important points arising from discussion in the chapter.

Context factors	Cultural factors
Police accountability and BWCs	Police legitimacy and BWCs
Police governance	Arabic/Islamic response to police BWCs
Security by surveillance and BWCs	Reproduction of occupational cultures and BWCs

Figure-2.3: Important contextual and cultural factors influencing use and meanings of BWC for UAE Police Officers

Previous research on BWCs is dominated by the US context, characterised by a *us and them* or agents of social control distrustful relationship with the black community and dismay from the rich white community, opting for private security and gated

communities. This context sharply differs from the UAE where Police appear a legitimate institution in the eyes of Government and citizenry. Again, unlike US-based research there is evidence of a customer-focus in UAE policing and the sense of justice amongst Officers and respect for Senior Officers that reduces opposition to technological innovation.

Public space is important in a hot climate with an Arab culture. Research suggests that while privacy in western cultures is construed in reference to individuals, in UAE privacy refers to family and home: outside of this citizens appear to take comfort from surveillance. Security is embedded in wider social processes such as planning in UAE and the Police are part of these governance systems.

CHAPTER-3 LITERATURE REVIEW 2: TECHNOLOGY, OCCUPATIONAL CULTURES AND INTERPRETATIVE FRAMEWORKS

The previous chapter focused on the culture and context of Abu Dhabi policing into which the body-worn cameras (BWC) has been introduced, suggesting in figure-2.4 factors that influence how BWCs are used and given meaning by police officers. This chapter looks through a different lens: the individual officer and Abu Dhabi's police organisation. The intention is to bring these four sets of factors together (culture, context, individual and organisation) into an analytical framework (framework-1 in Charmaz's terms) that will guide data gathering and analysis and form the basis for the theoretical contribution from this research in the framework-2 developed in Chapter-8, the analysis and triangulation with previous literature.

The reader will find two 'big' ideas in this chapter: occupational culture as a sub-set of cultural capital and learning as the driver of changes in occupational culture; in each case the chapter critically references previous research on BWCs. It is important to note that this is the first research on the use of BWCs in Islamic or an Arab policing context, hence its nature as exploratory research. Threaded throughout the chapter therefore are indications of how the Islamic and Arab police officer and organisation *might* differently use and construct interpretations: in each case these are potential differences, the validity of which will only crystallise after analysis of empirical data. One argument however, is that for the individual officer and Abu Dhabi police force, uses and interpretation of BWCs is quite different to portrayals in previous research, especially since (as Chapter-2 has shown) much of the earlier research relates to the US, where the legitimacy of policing is challenged, governances subject to criticism and accountabilities to sections of the population often the subject of popular protest. This thesis argues that Abu Dhabi policing has none of these characteristics.

Beginning with an exposition of Bourdieu's (1977; 1984) work on cultural capital in habitus, this thesis argues in response to Fine's critique that treated cultural capital as metaphoric, that the concept is analytically useful, especially Bourdieu's point that individuals' lived experience draws upon multiple and changing habituses that feature contradictions and dilemmas resulting in revised habituses. Then reviewing literature on cultural capital as occupational cultures, it is argued that for professions, such as

policing where the exercise of wisdom and accumulation of new knowledge is important, an important dynamic in occupational culture is learning. Learning is employed as a key theme in reviewing previous literature on the nature of police occupational cultures from Waddington's (1993) early work to current literature. This thesis explores how Police occupational culture in an Islamic and Arab culture might differ in terms of hierarchy and organisation, specialist occupations. Here canteen culture is differentiated from occupational culture. The chapter then reviews literature on interpreting BWC using the lens of occupational culture, showing how cultural reproduction occurs by learning about the use the meanings of the technology i.e. how the technology and the occupational culture shape and reshape each other. Just as Chapter-2 concluded by suggesting contextual and cultural factors influencing the use and meaning of BWCs, section-3.5 below gathers together factors at an individual and organisation level influencing the meanings Officers *may* attach to BWCs in Abu Dhabi. These four sets of factors form the content of an analytical framework developed in the latter parts of the chapter.

Section-3.6 below considers alternative analytical frameworks with which to investigate BWC in Abu Dhabi policing rejecting Azen's (1985) technology acceptance model (TAM) as rationalistic psychology, and Latour's (1992) actor network theory (ANT) as according agency to non-cognitive artefacts. The section goes on to suggest, given the importance of learning in interpreting BWC technology that Vygotsky's (1934) socio-cultural learning theory offers a promising theoretical approach. Synthesising from Arthur's (2011) complexity approach to technology and Illeris's (2006) workplace learning approach, the thesis justifies a new framework with which to analyse the interpretation of new technologies in the police occupational culture. In section-3.7 factors identified in the literature review influencing interpretations of BWCs in a police occupational culture, (under the heading of individual, organisation, context and culture) the new framework is transposed. After demonstrating how the framework can be used in practice and its superiority to existing (TAM and ANT) frameworks for analysing BWC in Abu Dhabi policing, the chapter concludes by discussing how the current approach addresses some of the gaps found in literature on BWCs and police occupational cultures, in particular lack of research in Muslim/Arab settings.

3.1 Social capital

A man is seen shooting another, but when he appears in court the Judge asks why he is pleading not guilty; “Well, your Honour,” replies the man, “it wasn’t me, it was my culture that made me do it.” The agent-structure problem has bedevilled sociology since its inception and it is the problem Bourdieu sets out to resolve. He challenges structuralism and scientism in sociology arguing, as Bouveresse (2000) notes, that they deny free will by suggesting that unarticulated and invisible rules are internalised and somehow determine human behaviour. For Bourdieu and Passeron (1979) rational choice theory is a monological consciousness, a methodological individualism that dangerously sets apart and abstracts the agent from society, introducing, Taylor (2000) argues, sociological determinism. Yet socially constructed forces (predispositions, metaphors, framework) do culturally impact: individual actions are dialogical, they enmesh the individual and the member of society; these Bourdieu (1977; 1984; 1990) terms *habitus*: free will without determinism yet referencing socially shaped predispositions and understandings encoded in cultural capital as a result of persistent use and patterning. Fields of knowledge and appropriate action disaggregate each individual’s total social capital into numerous habituses; each field (he uses the term thinking of magnetic fields of attraction) is mini-rationality. Rules encoded in institutions interrelate with habituses; shaped over time by institutions, as practices embodied in people through practice become embedded *morès* and rules. *Habitus* is not simple recipes or regularity of actions; social patterning only occurs when adjudged socially appropriate (Lane 2000). Given the thousands of decisions and actions each day brings every person, Bourdieu suggests we call upon (1984) *cognition without consciousness*: we just know what to do or what is expected without having to think about it. Cultural capital is a highly contested market and, as Margolis (2000) notes, breaks down into multiple habituses with disputed frontiers. We may have a *habitus* as a father, police officer, tennis player, and bird-watcher. His point is that in each case we act predispositionally; additionally, habituses clash, often posing dilemmas/trilemmas and contradictions. An important driver of learning and change in individuals is reconciling of choosing between habituses or different predispositions. This is why cross-cultural setting is an intense learning environment; habituses clash, metaphors need explaining, framework requires justification, meanings of words given consistency.

Bourdieu first identified the importance of habituated behaviour in his anthropological studies of Algerian peasants. He later fleshed out this concept in his sociological critiques of technocratic approaches to the French economy and its associated consumerism, his study of rural France and of the French universities, education system and culture. From these latter studies, he argued (1970) that education imposes and internalises (via symbolic violence) the inherited cultural *morés* of elites on working class students who would otherwise be dissonant to such views. Interestingly, his idea of cognition without consciousness now attracts substantial research attention, for example in Smallwood's (2006; 2008) work on mind-wandering, which as we shall see also references Vygotsky's (1934) socio-cultural learning theory. Unlike some current usage of 'culture' as a black box and deterministic explanation of behaviour (see Jenks 1993), for Bourdieu cultural reproduction (1984) is essential. He views schools (1971:200) exercising symbolic violence to *transform the collective heritage into the common individual consciousness*.

In *Distinction* (1979), Bourdieu presents a mature 'three-dimensional' framework consisting of differentiated forms of *capital* (including monetary, social and cultural capital), existing in contested social *fields* or markets and the *habitus* or trajectory, which predisposes agents to pursue particular strategies in each field in order to control capital. Putnam's (1993) work, firstly in Italy and then the US uses the idea of social capital (and its decline) to explain bonding and mutual support (Italian villages) and social fracturing (bowling alone) in US towns and cities. Social capital is now prominent as a tool in social policy discourse (Putnam 2000). For Bourdieu (1984), behaviour is the result of a complex interplay between these three dimensions rather than simply the result of ideology or 'courts, prisons and bands of armed men.' Bourdieu, (as Lane 2000 argues), is neither a post-modernist nor a post-structuralist.

Bourdieu (1977) argues that *Because the habitus is an endless capacity to engender products -thoughts, perceptions, expressions, actions - whose limits are set by the historically and socially situated conditions of its production, the conditioning, and conditional freedom it secures is as remote from a creation of unpredictable novelty as it is from a simple mechanical reproduction of the initial conditioning*. This echoes early institutional theory (Veblen 1919) and von Mises (1960) who (from an entirely different viewpoint speaks of constant treading on the same pathway resulting in rules

that come to form economic market behaviour. Perhaps the most important use of Bourdieu's work in economics is French Regulation Theory (for example Aglietta 1979 and Robels (1994) who use the idea of mutually reinforcing production and consumption patterns to explain economic stability between crises, arguing that breakdown occurs when these patterns misalign.

Bourdieu then develops the idea of cultural capital (in numerous forms) as an alternative to deterministic social theory, suggesting that it can be broken down into habituses, the contradictions and conflicts between which drive changes in habituses, making cultural capital a dynamic concept. The thesis now turns to critiques of Bourdieu and then to show how the idea is used as an explanatory tool for occupational cultures.

3.1.1 Critiques of social capital

This section examines three criticisms of Bourdieu's idea of social capital: (a) Fine's (2000) capital critique, (b) Wacquant's (2004) arguments on inconsistency and (c) conceptual inflation.

Ben Fine is a Marxist. From his perspective capital is dead labour embedded in constant and circulating capital employed via the creation of commodities to extract surplus value from labour. Social capital, he claims, (2000) meets none of these criteria; it is at best a misleading metaphor. He says, *Social capital is the degradation of scholarship, independent of its popularisation and potential self-help, win-win, reactionary overtones...Isolated occurrences aside, it can only be rejected, not appropriately transformed* (Fine 2002: 799). His joined by two mainstream Nobel Laureates, though from a different perspective, echoing Kenneth Arrow (1999) Robert Solow (2000: 7) concludes, *I do not see how dressing this set of issues in the language and apparatus of capital theory helps much one way or the other.*

Fine's critique continues that *the concept is "reductionist across a number of dimensions: to the individual, to utility maximisation and to universal categories* (Fine and Green 2000: 91). His point is to challenge what the epithet "social" actually means. Can there be non-social capital he asks (Fine 2002: 797)? (Borgatti and Foster 2003) join the critique suggestion adding social is mere tautology (capital is necessarily a

social interaction), going on to question how social capital can verifiably be a causality, can it be measured, can there be negative social capital?

A second set of arguments against the concept of social capital is exemplified by Wacquant (2004) but made by many commentators on Bourdieu: he rambles and uses terms inconsistently. His prose is more like a novel than philosophical discourse. However well made this point is, the value of the term remains, generally defined as above, leaving readers of Bourdieu to judge his prose and consistency.

A third line of criticism of social capital is that popularising the term “capital” to mean connectedness or competences/capabilities that can be exploited, may be good for the sales of airport books, but conceptual inflation devalues terminology. Instead of referring to environmental heritage, Jackson (2017) discusses *eco-capital*. A final example, arguing that attractive women can exploit their sexuality in negotiating and promotion situations, Green (2012) speaks of *Erotic Capital*. All analogies breakdown with over-use and social capital is no exception. An example may be Bourdieu’s ‘illusio’ analogy of the rules of the game. Games have pre-determined rules, carrying the analogy too far suggests an inability of actors by conscious action to alter structures.

This section has reviewed Bourdieu’s idea of social capital as a solution to the agency-structure problem noting its use to explain individual habituses and collective occupational cultures. Critiques of the idea were reviewed. There is power in these critiques, nevertheless, the terms are usefully employed, as a metaphor, in everyday and sociologically to indicate quality of social connectedness: a general proposition without precise causal relationships or metrics.

3.2 Nature of the police occupational cultures

Researchers now deploy the notion of social capital, as Bourdieu (1984) recommends as a lens for exploring sub-cultures, including occupational cultures – the subject of this section. Just as conceptual inflation bedevils the use of social culture as an idea so too the notion of sub-cultures is casually used, perhaps especially in business literature. Lewin’s (1958) mechanistic idea of cultural unfreeze-adjust-refreeze is frequently deployed, when a moment’s reflection reveals that cognitive and emotional being are best not treated like cars. Similarly, in literature we find neo-Taylorist ideas, such as

Nonaka and Takeuchi (1995) who advise managers to gather and formally record tacit knowledge, as though ‘culture’ can be bottled and sold. Both of these approaches are rejected here and instead, drawing on more sophisticated views of occupational cultures and human motivation (such as Gell-Mann 1995; Beinhocker 2007; Arthur 2010, 2015) this section unpacks the meaning of occupational cultures, discusses how the concept relates to and differs from the idea of professionalism and what research reveals characterises police occupational cultures and how they are reproduced. The section concludes by suggesting which factors from previous research on occupational cultures are relevant to analysing the occupational cultures of Abu Dhabi police officers.

3.2.1 The nature and character of occupational culture

Following Wilcock (2007) here is a valued social function deploying specific capabilities and loosely to which agents self-identify as belonging; as Wilcock (2006) says, *doing, being, becoming and belonging*. Clearly the functions that society values change over time and as technology alters, as mechanical watch makers and typesetters will vouch. Discussing sub-cultures, such as occupational cultures faces a number of conceptual issues to which the discussion below refer: (a) the talk versus action problematic to which Waddington (1999) draws our attention; (b) Lipsky’s (1980) point that street-level bureaucrats may act autonomously from organisational rules or superior’s instructions; and (c) that the plural in occupational cultures is important since in a hierarchy with diverse specialisms and social backgrounds monolithic cultures are unlikely (Reiner 1992). It is also important to be wary of projecting anthropomorphic agency on to organisations: can an organisation learn, or is it only the people in the organisation that can learn? Similarly, occupational cultures may characterise an organisations results, however, it is always the people populating the organisation that act.

Sub-cultures arise from socialisation (Schein 1985) and constructed as Weick (1979) in routine work; Giddens’s (1984) phrase is the *logic of practice*. Here an occupational culture means a task driven identity, references history, lore, legends, traditions, heroes, etiquette and routines, rules, principles, and practices providing a shared portrayal of identity and lens with which to view the world of practice. For Shearing and Ericson (1991:506) the police occupational cultures are functional.

It recognizes that police stories provide officers with tools they can use to get them through the business of police work without minimizing the fact that this still requires individual initiative and daring. It also recognizes that officers differ in their competence in using this cultural tool-kit ... Finally, it recognizes that what they do will be retrospectively constituted as ordered via the reflexive methods that are part of this doing.

Lipsky (1980:3) too views occupational cultures as short-circuiting decision processes for street-level bureaucrats *who interact directly with citizens in the course of their jobs, and who have substantial discretion in the execution of their work*. The occupational culture then guides and legitimises actions, sometimes as Chan's (1997) study in Australia shows, along with multitudinous studies in the US and UK, in a negative racist manner.

Although researchers such as Trice (1993:26) have attempted to codify the meaning of occupational cultures (in her case to seven characteristics: (1) esoteric knowledge and expertise, (2) extreme or unusual demands, (3) consciousness of kind, (4) pervasiveness, (5) favourable self-image and social value in tasks, (6) primary reference group, and (7) abundance of cultural forms. It is now accepted that occupational cultures require situated and contextual analysis and cannot be reduced to tick-boxing, despite the claims of “airport” (meaning superficial) books.

3.2.2 Interface of occupational culture and profession

Are occupational cultures within professionals different than those in non-professional work and is it useful to characterise policing as a profession? Torstendahl (1990) defines professionals in relation to wisdom and actions: professionals with formal and accumulated knowledge apply wisdom to solve problems that people outside the profession cannot solve. Sennett (2000) has a similar view, emphasising more the cumulated knowledge from practice. Torstendahl (1990) goes on to outline how professional codes and its knowledge base will alter as society and technology changes: professionals therefore update their skills. This occurs with different degrees of enthusiasm: museologists and tax accountants seem to embrace innovations; other professions may embrace new technologies but resist the associated organisational change (Thompson 1990). The craft unlike a profession is slow moving in terms of change (think blacksmiths and gardeners) are likely to have lower formal knowledge. Both crafts and professions (the police are an example) usually have bottom level entry

i.e. apprenticeship training to inculcate practice skills. In Bourdieu's (1990) conception professionals enjoy a *logic of practice* resulting from enculturation by practitioners: Powell and DiMaggio's (1991) isomorphism.

UK police regard themselves as a profession, their trade union is an Association of Professional Police Officers: as McCoy (2010) notes, they self-regulate a graduate entry profession, that has moved significantly from its traditional working-class recruitment base and now embrace (reluctantly as Fielding and Innes [2006] point out) performance metrics (in their case hard and soft measures of *reassurance policing*). US police too designate themselves as a profession claiming s Paoline *et al* (2000) find to becoming *more* professional by adopting specialist functions and community policing roles. As Buvik (2016) found in his research into nightshift working, US police are proud that they exercise professional discretion; often as the research reveals more in line with their personal moral code than the law. As Goldstein (1964) states there is law in books and law in practice. White's (1972) early research found police officers concerned that formal management techniques and communications (radios) would reduce their professional span of control. However, as McCoy (2010) found, horizontal communications remain stronger than upwardly vertical information flows (though downwardly vertical flows have increased – and with BWCs will increase further. Where top-down policy limits discretion, as Rowe's (2007) study of a positive arrest policy for domestic abuse in the UK, officers object to the erosion of professional judgement as time-wasting and distorting justice.

There is a debate over whether policing is a craft or a profession. Wilson (1968:283 states, *The patrolman is neither a bureaucrat nor a professional, but a member of a craft* and Sennett (2008) speaks of craft professions. However, most researchers and officers regard policing as a profession. This research will comment upon attitudes in Abu Dhabi.

Every complex organisation includes a multiplicity of sub-cultures (Czarniawska-Joerges 1992) outside of a profession the boundaries are wider and the justification for the sub-culture likely to be self-referencing and not (as is the case in a profession) some degree of peer-approval. Also, in a highly structured profession, such as policing, occupational sub-cultures are likely to follow patterns relating to the hierarchy.

3.2.3 The nature of police occupational cultures

This section explores the nature of police occupational cultures giving examples of how they operate. The point is to illustrate the diverse nature of the occupational cultures to inform analysis.

Although policing as an organised profession is often dated to the 1829 London Bow Street Runner, policing originated much early as Engels' (2006) notes, with the state and development of private property. Interestingly, he points out that as Manchester industrialised, rural-based Magistrates could not understand why manufacturing employers objected to small scale pilfering since in the rural setting, this was normal practice. This might be added to Bourdieu's (1984) examples of how crimes (witchcraft) and punishments (hanging, drawing and quartering) vary over time.

For Waddington (1998:292) police culture is *an expression of common values, attitudes, and beliefs within a police context*. He goes on to argue that negative portrayals of police culture (racism, corruption) fail to grasp their essential therapeutic value in allowing chatter as a coping strategy from emotionally exhausting work, providing a defensive solidarity that maintains active agency. He refers to this as *canteen culture*; a quite different phenomenon to occupational cultures, since the former reflects on practice while the latter guides and reinforces practice.

One of the most troubling areas of police occupational culture is the idea of corruption; that the guardians are not guarding, they are using their position to acquire wealth or power. Manning (2007) draws attention to minimal supervision when exercising discretion and limited upwards and negligible sideways accountability, highlighting also bottom-level entry and at relatively low salaries as providing motive and opportunity.

Corruption of goals is another area of police occupational culture research. Loftus (2012) argues that fighting crime to the exclusion of the other socially desirable goals of policing is a commonplace sub-culture, with Savage (2007) pointing out that away from the Station, officers are able to ignore instructions from superiors. Along similar lines, Sklansky (2007:20) suggests that *our cultural understandings of the policing*

organisation are framed within a story of cognitive burn-in – the public expect bad behaviour from Police. Where this occurs, Westmarland's (2005) research suggests that officers know what is unethical behaviour, but bonding to partners justifies ignoring the bending or breaking of rules. While in the US, researchers such as Henry (1994) find systematic corruption amongst police officers, UK research such as by Morton (1993) instead suggests unethical behaviour is more likely to be flouting procedural justice to secure convictions, with those officers (such as CID) most proximate to criminals most likely to behave unethically. This poses the ends/ means dilemma liberal democracy finds difficult Charman and Corcoran (2015) suggest, joining Prenzler (1997) in noting that officers who are part of sub-cultures justifying the means by the ends, carefully adopt a persona that is politically correct, aligning with Hochschild's (1983) idea of emotional labour i.e. creating a visual mask to hide one's authentic feelings.

Examples of occupational cultures abound in policing research many referencing Reiner's (1992:116) suggestion of a us versus them culture, *a product not only of isolation, but also of the need to be able to rely on colleagues in a tight spot, and a protective armour shielding the force as a whole from public knowledge of infractions*. The danger of any self-referencing habitus is the group-think disallows external accountability and can result in anti-social behaviour. This pattern of activity would occur where for example an internal code if broken, resulted in loss of promotion opportunities or shunning by colleagues.

In the media, gun crimes and police racism appear regular events. Research suggests that the latter actually is the case, since a large body of evidence suggests racism remains an important part of many occupational cultures in US policing (Solomos 1988; Reiner 1992; Holdaway 1995). As Reiner (1992) notes, within the sub occupational culture, such behaviour is justified by an *ambiguous mandate*: catch criminals but do it fairly. Chan (1997) relates how after publishing research showing that racist occupational cultures persisted in Australian police despite a multicultural society, she was asked to get prior approval from the police before publishing. As a result of official investigations identifying racist occupational cultures (Scarman and Macpherson in the UK and Ferguson and the US Department of Justice investigation of the Ferguson disturbances being examples) the police are de-legitimised because of prejudicial

behaviour in the eyes of some sections of the community. In the US, where the state monopoly on legal violence includes arming police, these issues can be very sharply posed. As Skogan's (2006) research suggests such police-public contact negatively affects confidence, open discourse negotiating new behaviour norms as Bradford *et al* (2009) recommend is unlikely to prove as effective as changed behaviour by the occupational sub-cultures.

Policing provides many examples of occupational cultures resisting hierarchic control. Champion (2005) suggests these are defence mechanisms allowing officers to do a difficult job, however, as Waddington (1999) notes, prejudiced or authoritarian behaviour reduces public confidence and frustrates Command groups, who invariably form occupational cultures responding to media and political scrutiny. Goldstein (1977) describes this as the rule-world of seniors and subverted in life-world on the streets. These sub-cultures, Goldsmith (1990) suggests create semi-autonomous occupational cultures where the power dialectic is bottom to top not top to bottom. In Turkey, Demirkol and Nalla (2017) find cynicism and autonomy, the former from citizens and the latter amongst officers for whom accountability is a distant prospect.

Recent research on police occupational cultures moves away from racism, corruption and autonomous disregard of policy. Loyens (2009) investigates how values vary between the Police Force and private policing organisations in Holland, finding that they share the same group loyalty, us versus them and machismo sub-cultures but differ on the predilection of police officers to fight crime at all costs. Interestingly, he suggests that stakeholder accountability is stronger amongst private police organisations. Loftus' (2015) research into Border Police suggests an occupational culture that negatively frames migrants and ignores policy in using databases, surveillance and force. Paoline's (2004) work categorises a range of US occupational cultures from US survey data including tough cops; clean beat crime fighters; avoiders (seeing out time); problem-solvers; selective enforcers and professional modernisers. However, interesting descriptively, Bourdieu's (1984) point in identifying sub-cultural habituses was to create points of engagement. Paoline does comment on Command as an occupational culture arguing that they fear instruction are simply ignored and though often the best qualified police, they spend their time fire-fighting with journalists and politicians defending Officers' actions.

One major area of police occupational cultures research is the roles of women officers. Schvaneveldt *et al's* (2005) literature review finds gendering of roles deeply rooted in western police forces: a recipe for the formation of women's occupational cultures. Few studies relate to women officers outside of Europe; exceptions being de Guzman and Frank 2004, Strobl 2008, Kim and Merlo 2010, Chu 2013) or take a cross-cultural perspective (again exceptions include Natarajan 1994; Chu and Sun 2007; Strobl and Sung 2009). Strobl and Sung (2009) contend that looking at the non-western world through the lens of western assumptions may not capture the essence of policewomen's perceptions in different cultural and social settings.

One of these studies, Chu (2017) surveys recruitment and satisfaction of women officers in Dubai, comparing with Taipei. She finds that women officers in Dubai are treated more equally than Kapur (2011) suggests occurs in other Arab states. Following the beginning of women's recruitment after 1977 in Dubai, there are now 1,500 women officers, 93 of whom are in leadership positions. Their motivation to join was extrinsic (helping people) rather than the intrinsic motivation found in Taipei. In Dubai the women officers expressed high levels of satisfaction with their job and self-efficacy. The current research will shed additional light on the position and occupational cultures of women officers in UAE and contrast some of Chu's Dubai findings with Abu Dhabi.

Other research on policing in Arab countries includes Algarni (2013) and Strobl (2016) with comments on policing Muslim cultures in Hills (2000) work on policing Africa. Strobl's (2016) study of Saudi Arabian policing did not focus on occupational cultures, however it is revealing. She argues that Saudi policing migrated from protecting colonialists, to protecting a Saudi elite result in governances being highly centralised and the police force facing legitimacy issues from its concentration on terrorism, the *Mutawa* or religious police and a civil code of law (unlike UAE) strictly based on sharia. Other authors, such as Al-Rasheed (2007) is an example, argue that Saudi policing lacks legitimacy and accountability. Strobl (2016) notes that crimes per 100,000 of population are 92 in Saudi Arabia; as noted in Chapter-1, the figure is 14 in UAE. Research into policing is at an early stage in Arab countries, this research will help fill this gap and shed light on how the Arab and Muslim context effects the formation of occupational cultures by exploring their interpretations of BWCs.

An interesting paper by Marks and Singh (2015) advances the agenda for policing research and calls for more research into Arab countries and less focus on US and UK policing.

By way of summary, exploring the nature of police occupational culture this section has noted the us-vs-them culture predominating in some US and UK cities, forming the context for much of the research on occupational cultures. Illegitimacy of policing in the eyes of significant sections of the community creates and is created by this type of occupational culture. An important aspect of the current research is to identify whether such an us-vs-them culture existing in the minds of UAE police and in its absence how police legitimacy impacts upon the police's interpretations of BWCs.

3.2.4 Reproduction and change in occupational culture

Bourdieu (1984) emphasises that dilemmas and contradictions within and between sub-cultures and with organisation and social cultures are a driver of change a crucial point if the static dynamics, attributed to Lewin at the beginning of this section, are to be avoided. Manning (1993:14) notes that *the tensions apparent in the occupational culture generally and between the organization and the environment are the dialectic source of change in policing*. The enemy of using occupational cultures as a positive driver of change is determinism. Determinism can be found in racial stereotyping, as Cunneen and Robb's (1987) Australian research shows and which Chan (2009) asserts is pervasive. Whatever dilemmas and contradiction are arising in Australian policing, it is arguable that they do not appear to be referencing the external multicultural environment and challenging the fields framing their interpretation of their role or the actions of individuals.

Culture at an organisational or sub-cultural occupational cultures level begins with enculturation at officer induction (Chan *et al* 2003) and continues as a *learned product of group experience* Schein (1985). Learning then, as a cognitive and emotional socio-cultural process is at the heart of reproducing and altering occupational cultures. Charman and Corcoran (2015) found this in their study of An Garda Síochána: the Irish Police. An ambitious cultural change programme was widely accepted as successful only because junior officers supported the programme and it was framed as part of a

life-long learning exercise. Sackmann (1991:41) is correct to say that cultural cognitions are *socially created, maintained, changed, and perpetuated*; they 'emerge in the process of joint problem-solving in which meanings are negotiated'. The challenge however is to understand this as an active process involving human agency: in short as a learning environment. It is to this issue the thesis will turn after summarising the results of this section.

Occupational cultures are then not deterministically the result of how police view their relation to citizens and society, instead they are dynamic social constructions resulting from an interplay between police and society; they are prone to change as society alters. *Logic of practice* means that over time police occupational cultures reproduce, but not in a linear way – they evolve as self-image changes with practice.

3.2.5 Abu Dhabi Police: organisation, hierarchy and enculturation

This section explores areas influencing Abu Dhabi police occupational culture: police organisation and hierarchy; induction and enculturation; and international connection and learning from international policing.

Police Organisation and hierarchy

A Patrol Police Office in Abu Dhabi Police reports to a Manager of the Security Patrolling section. In turn, these Managers report to the Station Manager. Note the conscious non-military nature of the titles. Above the Station Manager, the hierarchy is formally and more militaristically organised. Above police officer level is a Corporal promoted grade, and above this a Warrant officer. The command structure upwards is then a Lieutenant, First-Lieutenant, Captain, Major, Lieutenant Colonel, Colonel followed by Brigadier and General, one of whom is Commander of the force. Since the reader may wonder, the author holds the rank of Major located in the Police Academy with the role of Manager of Student Affairs.

Officer recruitment, induction, training and enculturation

Any citizen over eighteen years of age may apply to join Abu Dhabi Police, which is considered a professional job and rewarded accordingly. University graduates applying will be chosen on the basis of their speciality, such as Information Technology, criminology or psychology. Recruits join the Police Academy from which they

graduate with a degree in Policing and Law and rank of First Lieutenant after four-years of study, which includes on-the-job training.

Abu Dhabi Police Academy is modelled on Sandhurst Officer training college. In the past the regime was stricter, for example punishments such as running, press-ups, loss of own-time or standing alone. This was designed to promote group bonding. Currently a more relaxed regime focuses on education and gaining experience. Group bonding continues in the College. For example, individuals will rarely reveal the identity of wrong-doers, preferring group punishments. Today's Police recruits often have many alternative career opportunities, recruitment and training therefore seeks to embed public service ethics and attitudes. Police officers enjoy the esteem of most Emirati citizens for whom security is important. There are no measurements of 'fear' of the Police or institutional biases reported towards UAE police, for example, to which Al Kitbi (2010) and UAE 2017 Crime and Safety Report, attests. Policing in Abu Dhabi is by consent and with the low crime rate, police officers are often found helping community organisations. Politeness towards citizens is embedded in Police training and lapses easily recorded by citizen and displayed on social media.

At present the UAE population comprises 80% short-term migrants, with 192 nationalities working and potentially bringing new crimes or behaviours (Ekblom *et al* 2013). In fact, since contract rules are strict, there is little reported crime of difficult behaviour from migrants who's children mix with Emirati children in schools – an important integration factor since police officers are often found leading discussions in schools. Justice is swift in UAE, a fact well-known to all sections of the population, another explanatory factor for the low crime rate.

Katz *et al* (2017) show the importance hands-on instruction in the use of BWC accompanied by online video case examples of use. In some forces these approaches are now systematically embedded in officer training; a point to which this research returns in the recommendations section of the conclusions.

International connections and learning

Abu Dhabi Police is a small country open to outside ideas and learning from other cultures; this international perspective is strong in Abu Dhabi Police who liaise closely

with UK Police forces. Police officer exchanges, visits to Stations in other countries and their Police Academies (France and Germany are recent examples) are a constant source of new ideas for Abu Dhabi Police, including organisation such as Interpol. Current areas of ideas exchange include crime profiling and predictive crime, using big data analysis and artificial intelligence. There is a *benefit of newness* for Abu Dhabi Police: as a relatively new force it is open to ideas, structures can quickly alter. BWCs are an example of this being an idea arising from a visit of Emirati Police to US forces.

Abu Dhabi police occupational culture is shown here to be dynamic; its core self-image is characterised by stability and change: stability embedded in hierarchy and induction and change arising from changes in ambient culture and context and lessons learned from abroad (as later evidence will show).

3.3 Police occupational cultures in BWC research: mutual shaping?

Section 2.5 above critically evaluated the academic and industry literature on the use and response to BWC by police forces; as was noted there is little rigorous research on this subject and none specifically related to BWCs in an Arab or Islamic context. This section returns to this academic literature from a different perspective: to what extent are the interpretations of BWC influenced by police occupational cultures and in turn, to what extent are occupational cultures reshaped as a result of BWCs. The evidence is sketchy since as section 2.5 concluded, most of the research focuses on policy and privacy, unlike the present study, it is not from the perspective of police officers. In so far as this research references culture its main preoccupation is wider social culture, Lyon's (2001) characterisation of the *surveillance society* and Castell's (1992) prescient work on the *Information Society* being a good example.

This policy focus is reflected in the terminology: Bourdieu's governmentality, Clarke's (1988) *dataveillance* and now *mobiveillance* (Lyon 2010). Social level acceptance of surveillance often depends on technology spun-out of military research (GPS and drones are examples; DNA fingerprinting arose from public research and Internet-transmitted mobile video from private sector research; see Fitzpatrick 2010). Social acceptance of *technoculture* is founded on the ubiquity (in the west) of big data companies (Facebook, Amazon, Google, Apple) providing e-services of which people approve. *Dataveillance*, while associated with such services is often justified by the

simple phrase “post-9/11” – now a shorthand justification for a range of actions (war, surveillance, summary arrest) that would otherwise attract opposition (Lyon 2003). Cole (2004) establishes that social surveillance technologies do alter behaviour, though as Bigo and Guild (2005) find, in stratified societies, social groups are differentially affected.

Big data gathering, storage, analysis and retrieval (big data) has radically altered policing practice; Sheptycki (2000) speaks of intelligence-led policing, which as Cope (2004) notes replaces intelligence gathered in police-public interactions with data (information, knowledge) from databases, reducing the need for police-public interacting by emphasis on technical connectivity. As this rhetoric developed, police recruitment, training and activities, in short police behaviour, has altered, including the ability of superiors to remotely and nomadically monitor and instruct officers operating at street level (Sheptycki 2004). Sanders and Hannem (2014) argue changing the nature and sources of police knowledge from police-public interactions to police-computer interactions has profound effects on legitimacy; this however is a conclusion relating to western contexts. Of course, as Ellis *et al* (2017) note, the intelligence derived from BWCs is only a potential benefit to policing; releasing the potential depends upon linking databases and integrating information systems.

Mobile officers’ response to in-care video (ICV) was invariably supportive: with little additional effort it provided an evidence trail and increased legitimacy in the eyes of citizen by offering ‘objective’ evidence (Cubitt *et al* 2016). Car patrols as an occupational culture, which had always been popular, increased in popularity and esteem as fore-fronting technological policing.

One of the main tensions in policing is the autonomy of patrol officers relative to senior hierarchy, who the public hold accountable and who as Goldsmith (1990) argued can feel ignored by juniors. GPS tracking enabled seniors to follow location and time distribution by patrol officers. BWC have much greater control implications. For example, all policing agencies require officers to record (and perhaps justify) any use of force against citizens, though what constitutes force and its proportionality may be contested (Alpert and Smith 1999). Previously discretion on the use of force has largely been delegated to patrol officers (exceptions being major incidents directed on the spot

by superiors). Chan's (2001) point that patrol occupational culture officers are able to act autonomously is now qualified by the ability of seniors to track or request video footage in real time. From the seniors' occupational culture perspective greater accountability of patrol officers add control and therefore legitimacy (Ariel and Wain 2014). However, while the rhetoric over BWCs is primarily about criminals and evidencing, patrol occupational cultures are acutely aware of the additional control they provide to seniors as Drover and Ariel (2015) note.

In summary, *dataveillance* has important implications for tensions arising from Officer autonomy and the ability of seniors to control more elements of the patrol occupational culture: technology invariably redistributes power.

3.4 Summary

Figure-3.1 summarises the individual and organisational factors shaping police occupational culture in Abu Dhabi and in turn influencing how BWCs are used and interpreted by police officers. Importantly, tensions and issues influencing BWC interpretation are shown to be dynamic: the individual and organisation are interacting to make sense of the BWC. As agents, individual officers' actions reshape the structure and actions of the organisation, while at the same time the organisation's structures and ways-of-working place BWCs in thinking frameworks used by individual officers.

Individual factors	Organisation factors
Do officers interpret BWCs as improving policing	Tensions facing Police occupational cultures over BWCs
BWCs challenge to bonding patterns	Dilemmas (new and old) for occupational cultures from BWCs
Challenge to social roles interacting with citizen from BWCs	Redistribution of power in hierarchy from BWCs

Figure-3.1: Important individual and organisation factors influencing use and meanings of BWC for UAE Police officers

3.5 Reproducing occupational cultures – learning and mapping

To take stock; this chapter has travelled from general theory in the form of Bourdieu's social capital to its translation into occupational cultures and specifically those in policing arguing that envisaging policing as a profession helps construct and constrain the nature and operation of occupational cultures. Since as Bourdieu argued

occupational sub-cultures develop and change as a result of external environment, organisational change (including new technologies) and tensions within and between occupational cultures, section 3.2.3 explored the general nature of police occupational cultures and considered examples from previous research. These examples illustrate that tension exists between specialist police groups and hierarchic tensions between seniors and autonomous patrol officers. Section 3.2.4 argued that police occupational cultures fail as a conceptual instrument if used deterministically; instead they are dynamic constructions open to change. Some of this change as section 3.3 argued is a result of power redistribution resulting from new technologies, such as BWCs. Part of the unintended (or unarticulated) consequences of BWCs is changing hierarchic relations and potentially relations within occupational cultures (such as group bonding and loyalty above organisational loyalty). A summary of the individual and organisation factors influencing how BWCs in police occupational cultures is given in section 3.4. The chapter now moves to understanding the process by which these changes occur; in effect what and how learning occurs. This section uses Engeström (1987; 2007) and Illeris's interpretation of Vygotsky's (1934) socio-cultural learning theory to suggest a framework for learning in police occupational cultures. After this the factors influencing interpretation of BWCs are embedded in a new analytical framework synthesising (a) research on police occupational cultures; with a complexity approach to technology (Arthur 2011); and Vygotsky's learning approach.

Vygotsky's (1934) socio-cultural theory (SCT) of learning begins with cognitive active agents (people) who's learning occurs with reference to the organisation they form part of and the wider context and culture from which they interpret new knowledge or experiences. Sharply disputing purely cognitive approaches to learning, such as Piaget (Wertsch 1985), Vygotsky insists that individual sense-making is socially and culturally influenced, with consciousness at the centre (Nardi 1985). This forms a zone of proximal development (ZPD) i.e. the thinking zone in which inherited concepts, frameworks and metaphors construct new semiotic interpretations (Daniels *et al* 2007). Often termed activity theory, SCT insists on active, conscious and emotional engagement in learning process; in doing so active agency is more prominent than Argyris and Schön's (1996) double-loop learning (i.e. single loop is learning and double loop learning and then acting upon) or Wenger's (1998) communities of practice. The artefact in the ZPD, for example the BWC, is similar to Dewey's (1939) pragmatic

technology, except that like Kolb's (1984) experiential learning cycle Vygotsky envisages multiple iterations between inherited learning and making sense of the new artefact. His view echo important thinking in western European pedagogy, such as Engeström (1987) third-generation activity theory involving *cycles of expansive learning* (i.e. why, why, why), interrogating - what Mayer and Land (2003) term *troublesome knowledge* (complex and problematic). A similar stance, though without processual analysis, is taken in Habermas' (1984) *emancipatory knowledge* (i.e. new paradigmatic thinking), White's (1994) *deep learning* (reflexivity) and the idea of deuterio (new framework) learning (Sensat 1978).

Unlike knowledge management theory that fails to address how new learning occurs or business "learning organisation" theory that focuses on mechanistically formalising tacit knowledge (Nonaka and Takeuchi 1995; Swan and Scarborough 2001), emotional attachment to people and processes are central for Vygotsky. Senge for example points to ambiguities and power and instead argues that inanimate constructions (organisations) can learn. Vygotsky like Damasio (1994) criticises counter-posing emotion and reason and Brothers (1997) bemoans the idea of an *isolated mind*, bereft of cultural or contextual linkages: a physics-envy (Best 1998).

ZPD best occur in a flow (Csikszentmihalyi 1990) and involves pondering from various angles how to interpret (for example) the new BWC technology. Note that the ZPD activity occurs during other activities: mental modelling and 'feeling' about the new technology in *task-unrelated-thought*. Smallwood (2013) suggests that 50% of thinking is unconscious. The prepared mind (serendipity) or *mindset* (Dweck 2006) is able to make mental contrasts.

Mental contrasting, a conscious, and cognitively demanding strategy develops its effects on behaviour change through non-conscious cognitive and motivational mechanisms, as well as by equipping people to effectively respond to set-backs. Oettingen and Schwörer (2013)

Reiff (2016) argues we build a better tomorrow by selectively contrasting with yesterday. Deep new learning involves unlearning. Unlearning is not forgetting or parking existing knowledge; instead it relinquishes old ways-of-working (Duffy 2003) and habituates new patterns of thinking and enactment. Such unlearning results in what Bourdieu terms (1971) a new *enstructured culture*. Unlearning can be collective as when *communities of memory* enslave or liberate (Margalit 2002), or new national

identities are imagined (Anderson 2016). It can involve *shameful amnesia* (Jankélévitch 1996), *the memory of wounds* (Milosz 1981), or as Ricoeur (2004) argues forgiving if not forgetting memories. Socio-cultural learning is then distributed with wider society or in the case of BWCs within occupational cultures. Processes of knowledge distribution challenge epistemic dualities and dilemmas between occupational cultures forcing individuals to reassess their worldview. New frameworks and ways of thinking are carried in informal discourse, play and eventually embedded in new interpretations.

Just as culture can be used as a black box i.e. an explanation not inviting unpacking of concepts and evidence, so too knowledge can be inserted into social analysis without explanatory concepts showing how the knowledge has been socially constructed and why particular forms for knowledge are constructed. Daniel's (2001) work on Vygotsky and Sociology is particularly useful in making these connections. This section illustrates conceptual tools for understanding the reproduction of police occupational culture (and later interpretation of BWCs) using Vygotsky's socio-cultural approach to learning. For police officers, this learning is akin to the workplace learning studied by Pedlar 1983 and Schön 1983 Raelin (2008) later Illeris (2003).

3.6 Framework alternatives

In section 3.5 a new synthetic approach to understanding how learning is a critical driver on of technology is interpreted in sub-systemic ecosystems: in this case police occupational cultures. Prior to building on this idea, it is important to consider what might be alternative analytical approaches i.e. what a new analytical framework is superior to those already available. Two such alternatives are considered below: the technology acceptance model (TAM) and actor network theory (ANT).

3.6.1 Technology acceptance model

This section considers if the technology acceptance model is a suitable analytical framework for use in this research, arguing that it is not suitable. This conclusion arises from (a) discussion on the theoretical basis of the TAM approach and (b) consideration of in what contexts previous researchers believe the model can be used.

TAM as a theoretical approach

TAM has its philosophical roots in psychology: the theory of reasoned action (TRA) and theory of planned behaviour (TPB). Fishbein and Ajzen (1975) suggested a gulf between the intent and action explains why a particular technology meets resistance, leading Al-Barbin (2010) to summarise TAM as decomposing the gap between intent and action into manageable steps. For Azen (1985) intentions are rational and the challenge is to connect rational intent with emotional attachment to desired outcome. As Connor and Armitage (1998) point out the theory presumes rationality and (Oliver and Bearden 1985) further assumes no crossover in goals or incompatibility between capability and goal. Overall, in origin TAMs was a psycho-individual approach taking little account of culture and context more fitting for rationalistic modelling than serious analysis of technical interpretation. Seeking to strengthen the theory, within a behavioural psychology perspective, Ajzen (1991) introduced the TPA, which emphasises consequentialist evaluation of normative values and social controls; like TRA it (controversially) assumes individual rationality. Chu and Chen's (2016) main criticism is that TPA does not directly feature any technology; it is a generic (behavioural) theory of decision-taking.

Davis (1989) developed the TAM-2 substituting usability for goal (TRA) and outcomes (TRA), whilst retaining the assumed rationality of individuals and ignoring social context. Straub *et al* (1997) added a variable to take account of resistance from culture, Plouffe (2001) variables relating to subjective appreciation by users and later Brown *et al* (2002) included environment as a variable. This set of variables (with other more minor amendments) constitutes TAM-2, originally posited by Venkatesh and Davis (2000). TAM-2 continues to be premised on the idea of rational individual users; this may be a reasonable assumption if (for example) informed (technical) users are testing the use (does it work?) of a technology. However, for consumer-oriented technologies the assumption is questionable, and the weightings given in the quantitative model to environment and culture could be arbitrary. Additionally, as Triandis (1980) pointed out in early debates on TAM, user emotional attachment to an old or existing technology (including its relationships and ways-of-working) may be a critical factor in evaluating a new technology.

For these reasons, this research prefers to use an approach centred on users rather than technology, exploring processes of introduction in addition to outcomes, and one that assumes emotional-cognitive agents (i.e. non-rational).

TAM has evolved into framework for modelling after technology design and development the technical acceptance of technology products, identifying and giving measurable weighting to quantified performance proxies. Following Brown *et al* (2002) and Straub *et al* (1997) the TAM-2 framework now includes measures for the (positive or negative) influence of environment and culture. However, to use Adler's (1992) terms, the focus of TAM-2, like the original TAM remains on the technical use of the target technology, not on usefulness, usability or usage. This is evidenced by the technical (computing, information technology, systems) journals in which TAM appears. Wingo *et al* (2017) review eight-five publications over twenty-seven years, citing or using TAM. Many of these publications are book chapters, or reports; none appeared in the leading journal in the field of innovation, *Research Policy*; most are in technical not socio-technical innovation journals.

In summary, TAM-2 retains the theoretical weaknesses of TAM-1: it focuses on the technical use of a technology without deeply including the social influences of context and culture on the social acceptability of the technology. However, all theories and methodologies have limitations and it is understandable that the epistemological predilection of some researchers draws them towards ascribing numeric values to objective and subjective variables or proxies for variables. This researcher prefers an alternative epistemological choice.

TAM and context

In what context might TAM-2 be employed as a research framework?

- i. TAM-2 is summative not processual. Intended as Wingo *et al* (2017) suggest gathering data on acceptance after the introduction of a technology and not intended to interrogate the processes of technology introduction as they occur.
- ii. TAM-2 is designed to create positivist metrics relating to a defined technology with anticipated (not unintended) results. Rauschnabel and Young (2016) used TAM-2 to frame the gathering of marketing data for virtual reality products in Germany.

Their focus was on the technical use of the technology and their conclusion was that TAM-2 helpfully framed their analysis.

- iii. The socio-cultural setting into which a technology is introduction is assumed in TAM-2 to be stable and to have known and measurable outcomes, or proxies for outcomes. Tarhini *et al* (2015) for example, used TAM-2 as a framework for analysing the introduction of e-learning in Lebanon, finding that it inadequately captures cultural acceptability and diversity.

To take stock, the contexts in which TAM-2 may be a useful analytical framework, as shown by previous researchers are (i) above, after not during the introduction of the new technology; (ii) where the technical use of the technology rather than its social acceptability is being researched; and (iii) where contextual and cultural influences on the acceptance of the technology are believed to be weak. None of these three conditions apply to the introduction of BWCs in UAE. In this case, (i) the research relates to the introduction process *and* outcomes; (ii) the social acceptance (by POs) of the technology is a major research question; and (iii) since no previous research on BWCs has targeted an Arab/Muslin context it cannot be assumed that cultural influences are known or weak.

In summary, the research context of BWC technology in UAE policing make TAM-2 an unsuitable research framework, added to which, there remain theoretical disputes over the validity of its theoretical under-pinning. Finally, since this research investigates the processes involved in introducing BWC in UAE policing, the researcher is more comfortable taking a qualitative epistemic choice.

3.6.2 Actor Network Theory

Actor network theory (ANT), as Ziemkendorf (2007:2) points out can be considered the dominant discourse in sociological analysis of technology, inheriting the contributions from MacKenzie and Wajcman (1985) and the social shaping of technology school. Developed by Latour (1987; 1988; 1992), Law and Hassard (1999) and Callon (1994; 1986) it stresses the heterogeneity and contingency of networks creating and using new technologies (Bijker 1987). The great strength of ANT is the absence of determinism; however, it achieves this by predicating *actants* (agents and artefacts) interacting in ways governed by social and economic exigencies; no particular outcome is therefore privileged the technology is shaped contingently giving

what Latour (1987) terms *interpretive flexibility*. As a general post-facto way of giving narrative to how technology develops ANT has its strengths. For example, analyses of bicycles and doors are revealing. However, these are post-facto analyses; ANT has yet to show its efficacy in real-time or to provide the predictive conclusions we expect from robust theory. The central difficulty of ANT is that in giving agency to *actants*, it is according intentionality to inanimate objects and how one object relates to other objects is not a matter of intent or conscious decision; it is the result of how humans decide to coordinate the objects. BWCs have no agency, they are given meaning and interpreted only by human beings: BWCs cannot shape themselves, nor the technologies or organisations they interact with; only humans can intend contingency, contingency is given to technologies. ANT therefore lacks the intellectual robustness to guide this research. It may have had some use were this post-facto analysis, but as the data will show, interpretations of BWCs in Abu Dhabi is work-in-progress, the analysis of which requires a different conceptual instrument.

In summary, it seems fair to conclude from criticisms of TAM and ANT that they are not the appropriate conceptual instruments with which to conduct this research; it remains however to be proven that the Vygotsky-Arthur based framework is the right instrument.

3.6.3 Learning in ecosystems

Here it is asserted that Vygotskian focus and expansive learning cycles grounded in life experience and new experiences from technologies and organisational reformations aligns closely with complexity economies; a post-positivist perspective on economies and technology rooted in ecosystems theory developed at the Santa Fe Institute (Arthur 2010, 2015) and building from evolutionary economics (Nelson and Winter 1982) and Mackenzie's social shaping thesis (Mackenzie *et al* 1985).

Rejecting the homo economus assumptions inherent in classical economics, a range of social theorists have adopted the ecosystems metaphor from biology in order to embed change and complex social interactions into analyses of technological change and avoid deterministic presumptions of exogenous technology. Early theorists include Polanyi (1958), Nelson and Winter (1982), Freeman (1992), Witt (1993) and Andersen (1996). Important milestones in the genealogy of non-deterministic thinking were Freeman and

Perez's (1984) idea of socio-technical paradigms and Mackenzie and Wajcman's (1985) social shaping thesis. Research at the multidisciplinary Santa Fe Institute by Gell-Mann 1995; Beinhocker 2007 and Arthur (2010; 2015) has resulted in a body of thinking complexity (or ecosystem) economics the central point of which is that an ecosystem, such as a police force (located in a wider socio-cultural ecosystem), is composed of independent parts – there is no central coordination. External changes or learned changes in the behaviour of any one factor has unintended consequences rippling throughout the system. Factors in the system learn new behaviour patterns giving system stability, however, change and new emergences are always imminent arising from external shocks, new internal interactions or the introduction of new technology (and associated organisational change) such as BWCs emerges.

From a learning viewpoint what is happening here? Early work by socio-cultural researchers such as Bødker (1989), Kuutti (1991) and Nardi (1996) tended to focus on human-computer interactions. Only later did people such as Engeström (1999) apply socio-cultural theory (SCT) to workplace situations such as hospital wards and only later still have researchers began to explore how technology is interpreted as a learning process with Adams (2017) and Fukushima (2017) building on work by Kaptelinin and Nardi (2012). Illeris (2002; 2003 a/b) used this world to suggest a framework, an adaptation of which is used as the central analytical framework in this research.

Figure-3.2 shows the individual (in this case police officer) learning/interpreting an object (in this case BWCs) influenced by the organisation in which they work (in this case Abu Dhabi police). This learning occurs using language, frameworks, metaphors, symbolisms and iconography from a specific culture and context, in this case UAE. Sense is made of new information (the practice of using BWCs) in the zone of proximal development at the centre of figure-3.2: this is illustrative of cognitive individual's new learning. Like all ecosystems, the introduction of a new variable (BWCs) has multiple effects on existing variables and understandings: unintended and unforeseen practice, leads to officer's making interpretations that cannot be previously determined. The next section shows how grounding this framework in UAE policing and the patterns of use of BWCs provides a distinctively new framework for analysing how police within a particular occupational culture interpret BWCs.

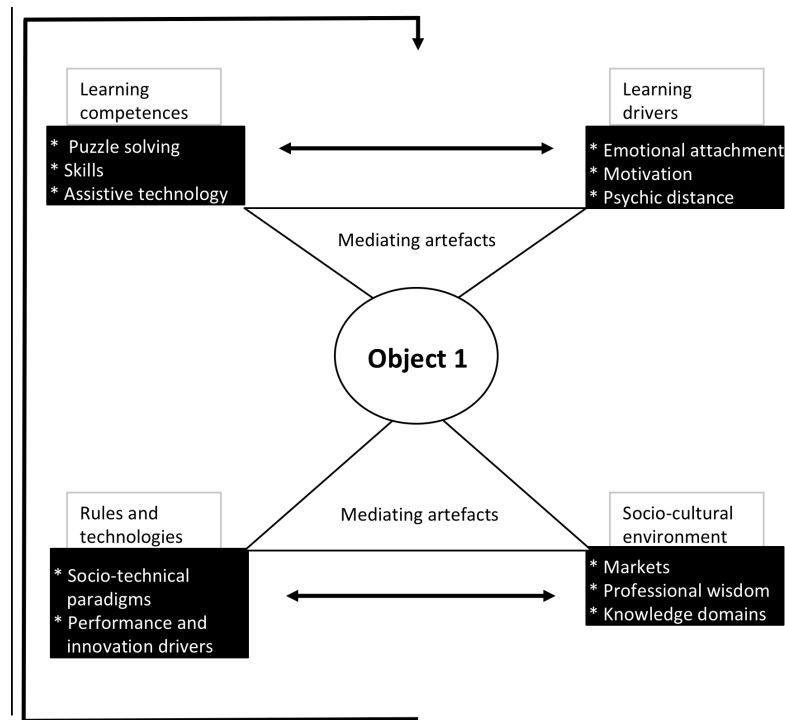


Figure-3.2: Illeris's (2006) learning framework

3.7 Building a conceptual framework

Figure-3.3 brings together from the above section the major influences on individual officer's interpretations of BWCs, showing the individual, organisation, cultural and contextual influences on their learning to interpret BWCs.

Figure-3.4 embeds these influences into an illustration of the conceptual framework this research employs, noting also that figure-3.4 is an initial framework for use in structuring data gathering and analysis and derived from previous research literature.

Individual factors	Organisation factors
Do officers interpret BWCs as improving policing	Tensions facing Police occupational cultures over BWCs
BWCs challenge to bonding patterns	Dilemmas (new and old) for occupational cultures from BWCs
Challenge to social roles interacting with citizen from BWCs	Redistribution of power in hierarchy from BWCs
Context factors	Cultural factors
Police accountability and BWCs	Police legitimacy and BWCs
Police governances	Arabic/Islamic response to police BWCs
Security by surveillance and BWCs	Reproduction of occupational cultures and BWCs

Figure-3.3: Factors influencing interpretation of BWC by Abu Dhabi Police officers

This framework will be superseded below in the analysis chapter by a framework-2 (see Charmaz 2006) that incorporates changes and nuances derived from data analysis.

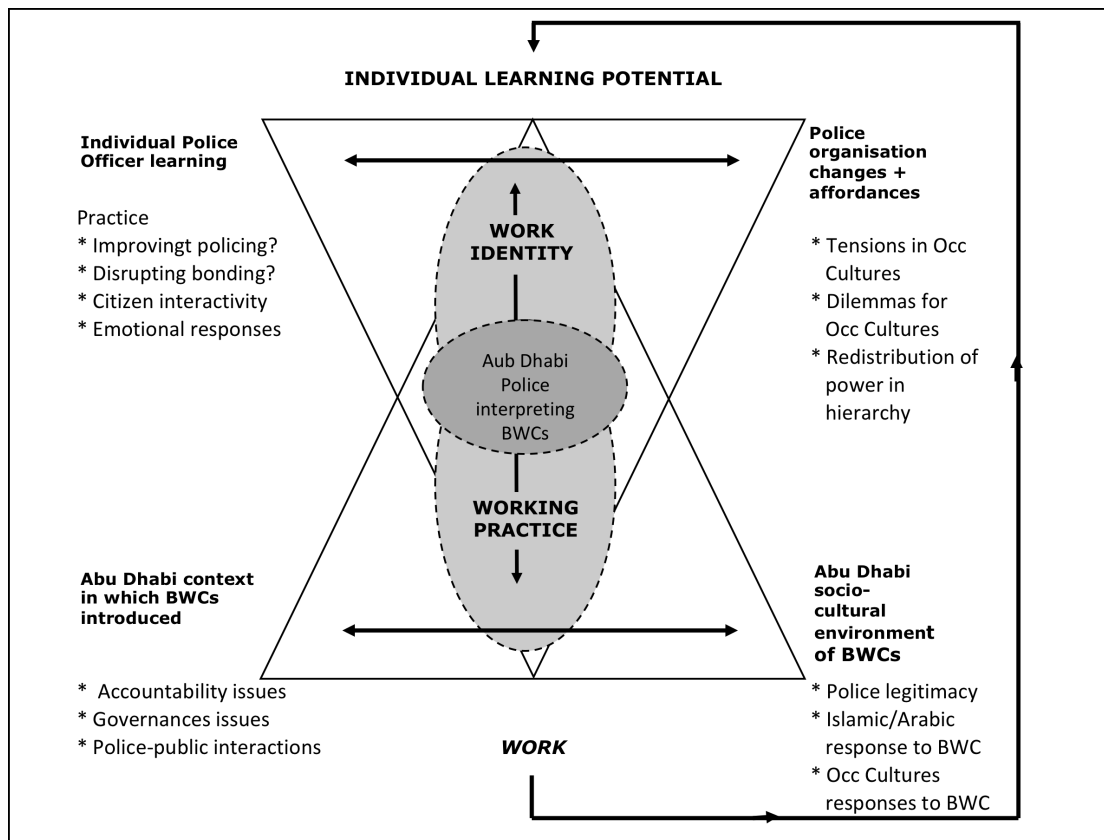


Figure-3.4: Framework for analysing interpretation of BWC by Abu Dhabi Police officers

Figure-3.4 has five major interaction parts: (1) the individual who learns to interpret BWCs within (2) the Abu Dhabi police organisation and its occupational cultures, referencing (3) the context that is Abu Dhabi, it's Government and citizens and (4) the particular cultural context with the Arabic and Islamic influences; all of which help shape (5) the zone of proximal development or learning zone in which the BWCs are interpreted. The downward isosceles triangle in figure-3.3 features individual Police officers working within the Abu Dhabi Police organisation and its occupational cultures, while the upwards triangle represents the wider social context and culture that created and is served by the Police. In each case a list of factors, drawn from the Chapters 2 and 3 literature reviews, and summarised in figure-3.3 are shown. At the centre of the figure is the learning zone (or zone of proximal development to use Vygotsky's term) in which individual members of occupational cultures interpret the BWCs referencing the wider socio-cultural context. SCT is often called activity theory

precisely because it is the activity of active agents in the learning zone that creates interpretations of the new BWC technology; there is no passive learning nor is there learning by artefacts (ANT) or reductionism to simply individual psychology (TAM).

This framework joins the three research questions as the major scaffolding giving structure to this research. It will be used to (a) structure data gathering (referencing the list of factors drawn from the literature review), (b) to guide data presentation (also taking note of coding and themes from literature and data reduction) and (c) to guide analysis i.e. answer the research questions on how BWCs are interpreted by Abu Dhabi police. As a result of this analysis, (d) a revised framework-2 will be suggested, being a final conceptual picture of influences on interpreting BWCs in Abu Dhabi and as such a major theoretical contribution from this research. The framework is then both a practical guide and the base from which this research develops new theory.

3.8 Summary, literature gaps and research questions

Following an introductory chapter positioning this research, chapter-2 discussed previous research relevant to the culture and context into which the BWC in Abu Dhabi is now being used, arriving at (figure-2.4) a summary of key influences in the culture and context shaping how police officers interpret the BWC. Chapter-3's aim was to identify similar key factors influencing interpretation, in this case from the viewpoint of individual officers and the police organisation. The chapter builds up to the later sections, which are able to present a conceptual framework (figure-3.4 below) guiding data gathering, presentation and analysis. Following the current chapter, chapter-4 proceeds to outline and justify the method of data gathering and then data is presented and analysed.

This chapter has explored two key sets of concepts: those associated with occupational culture and those creating learning-lenses with which to deeply understand how interpretation occurs. Using Bourdieu's (1984) idea of social capital, the chapter illustrates the theoretical foundations for ideas of habitus and occupational culture. Discussion on the nature of police occupational culture concluded that since much of the research references contexts in which police legitimacy is lacking, there are gaps in the literature applying the idea of police occupational culture to where policing is more legitimate, and the nature of occupational culture is not us-vs-them. In doing so the

chapter argues that policing is better viewed as a (dynamic) professional than a (less dynamic) craft. Police occupational cultures are argued to be best viewed not as only internally-referencing, but rather as helping create wider social culture and shaped by the wider social culture. This addresses a gap in previous research on police occupational culture influence on BWC interpretation, most of which does not deeply reference culture and context. Abu Dhabi police hierarchy, induction and international connections are described and shown to influence the reproduction of police occupational culture.

Interpretation here is viewed as an act of learning: making sense of new information (the BWC) in the light of previous experience, self-images, symbolisms and emotional attachments. The chapter has argued that Vygotsky's approach to learning is a suitable learning framework to adapt for analysis of BWC interpretation, characterised by individuals, learning within and organisation and referencing wider culture and context. Figure-3.4 illustrates this approach. Using Charmaz's (2006) research design, this figure provides a conceptual framework guiding data gathering, presentation and analysis. A second framework (framework-2), which incorporates the results of data analysis, will form the major theoretical contribution from this research. It is to the method of data gathering and its justification that this thesis now turns.

CHAPTER-4

RESEARCH METHODOLOGY AND METHOD

It is said Chalmers (1994:28) that social scientists focus on research method, whereas physical scientists focus on their research results. Here I hope to give both equal treatment; nevertheless, establishing causality in social science remains problematic; *physics-envy* (use of positivist method) cannot overcome the need for rigorous method. Rigour requires empirical research that is reliable, honest, repeatable and relevant to the research questions. The researcher makes choices from options at every stage: data selection, gathering, presentation and analysis. This chapter outlines the research method adopted here and justifies why choices made are the most appropriate in the context of this study. Necessarily the chapter follows both highly theoretical paths (for example ontology, epistemology, and research design) and deeply practical choices (for example sampling, questionnaire design and steps in translation and coding). Choice justifications are accompanied by references to research methods literature and examples of how the choices follow (or does not follow) paths trodden by previous researchers in the field.

It is particularly important in exploratory research such as this, which gathers a great deal of data (100,000 words of transcripts from 38 interviews, 3-months

and thirteen hours video of critical incidents and officer's subsequent interpretive narratives, that data gathering, interpretation, presentation and analysis are clearly structured: a further aim of the chapter.

Following McGregor and Murnane (2010) methodology here refers to how research is conducted – ontological, epistemological and research design issues; whereas method is the actual tools and processes used in the research. The flow of the chapter is from methodology to method.

This research is multi-method, not in the usual sense of combining qualitative and quantitative methods (the research is entirely qualitative for reasons given below); here the mix is between interview, observation and videoed narrations of critical incidents. In order to clearly illustrate the application of each method, a section for each of the three outlines how sampling, gathering, manipulation and analysis is done. One section

(4.7) compares coding for interview and observation material on the one hand and narrative analysis on the other.

Figure-4.1 illustrates the chapter's structure. Section-1 refers to methodological issues; section 4.2 justifies choice of research questions and section (4.3) research design – in this case using Charmaz's (2006) constructed grounded theory. The following three sections (4.4, 4.5 and 4.6) each deal with the three methods of data gathering: interviews, observation and critical incidents. Section 4.7 compares coding techniques used for interview data and in the narrative analysis. Final sections defend the validity of the research (4.8) and ethical issues (4.9).

Section	Section heading	Purpose of section
4	Introduction	
4.1.1	Ontological and epistemological stance	Clarify nature of knowledge in research
4.1.2	Research Approach	Justify mix of methods
4.1.3	Abductive Approach	Basis of reason argument
4.1.4	Strategy of Enquiry	Why this is exploratory research: why the research is theory constitutive not theory testing i.e. exploratory and wholly qualitative
4.1.5	Levels and Unit of Analysis	Justify Abu Dhabi police including its occupational cultures as unit of analysis
4.2	Research questions	Justify research questions against possible alternatives
4.3	Research Design	Justify use of constructed grounded theory
4.4	Interviews: data selection, gathering, presentation and analysis	Justify interview sample, data gathering, its manipulation, presentation and analysis
4.5	Observation: data selection, gathering, presentation and analysis	Justify observation technique in particular avoiding bias, data gathering and thematic coding in analysis
4.6	Critical incidents: data selection, gathering, presentation and analysis	Justify critical incident approach, choice of incidents, narrative presentation and analysis
4.7	Coding themes and narrative analysis for video	Re-visit coding and narrative analysis detailing coding and narrative analysis approaches
4.8	Validity, generalisation and theory	
4.8.1	Validity	Justify usefulness as validity standards
4.8.2	Generalisation	Outline limits to generalisation
4.8.3	Theorisations	Justify nature of theory developed
4.9	Ethics	Justify choices over ethical issues and ethical approvals of research

Figure-4.1: Structure of methods chapter

Since this research generates a considerable amount of data, figure-4.2 is a summary of the data gathered and proposed method of analysis. To avoid confusion as the figure shows, each interviewee can be individually identified by the simple abbreviations show, added to which is a numerical identification where there is more than one

respondent. Also, to facilitate gender analysis, this too is indicated in the abbreviation. For example, eight members of the Social Support Centre (SSC) team were interviewed: these are called to incidents involving mixed gender. SSC-F/2 is a second interviewee woman in the team; SSC-M/SM/1 is the first interviewed male Senior Manager in the SSC team. Interview transcripts, selected observation notes and narratives from critical incidents are included in the Appendices, with individual respondents annotated using this designation system.

Data gathered	Who and designation	Data designation	Interviewees/ Time	Analysis approach
Observation: Note taking, reflective diary	Active service officers day and night patrol cars	ASO-O/n	3-months observation	Coded (NVivo) and themed (see section 4.7)
Critical incidents at CID Department: Video recording	CID officers (citizens)	CID-CI/n	700 hours	Narrative and inter-textual analysis
Interviews: Alshabiya Police Station	10-Officers + two Senior Officers	APS/n + APS-SO/n	12-Interviews	Coded (NVivo) and themed
Interviews: Khalif Police Station	7-officers + Senior officer	KPS/n + KPS-SO	8-Interviews	Coded (NVivo) and themed
Interview: Justice Department practice on BWCs	Public Prosecutor	PF	1-interview	Coded (NVivo) and themed
Interview: Strategy and Institutional Development Centre	Senior Manager SID	SID	1-interview	Coded (NVivo) and themed
Interviews: Information & Communications Systems	IT service official + Senior Manager	ITS + ITS-M	2-interviews	Coded (NVivo) and themed
Interviews: Criminal Investigation Department: Visualisation and Support	CID visualisation officer + Senior Manager	CI-P and CI-P/M	2-interviews	Coded (NVivo) and themed
Interviews: SSC (Social Support Centre)	4 Male officers + 2 Female officers + 2 Senior Managers	SSC-M/n + SSC-F/n + SSC-M/SM/n	8-interviews	Coded (NVivo) and themed
Interviews: Police Prison Department	3 officers + one Manager	PPD/n + PPD-M/n	4-interviews	Coded (NVivo) and themed

Figure-4.2: Summary of data gathered, respondent designations and analysis method

4.1 Methodology

This section includes five sub-sections. Section 4.1.1 argues for a realist ontology and constructivist epistemology, section 4.1.2 justifies the method mix and 4.1.3 the use of abductive reasoning. Justification of an exploratory research strategy (4.1.4) is

followed (4.1.5) by my reasons for taking the Abu Dhabi police and the introduction of the BWC as the unit of analysis.

4.1.1 Ontological and epistemological stance

As Sayer (2000) the social world can only be understood from the viewpoint of active agency; people are involved in conceptualising the realities facing people. Events and information ‘nuggets’ are gathered to create a view of the world, which is then interpreted to provide meaning (Pauwels and Mattysens 2004). Since social and people-related events are enacted in time and context, as Sztompka (1994) argues the meaning of social facts can only be understood in context. Bhaskar (1978) terming such an ontological perspective *realism*, goes on to note that the alternative scepticism means *nothing* can be validly concluded or as Burrell and Morgan (1979) suggest from a relativist perspective *anything* can be concluded and all conclusions are equally valid. The interpretation of BWCs in Abu Dhabi by Police officers can only be established by investigating the meanings given by these officers; there is no ‘out there’ reality, awaiting discovery (Kvale 1996; Pettigrew 1997). Sanders *et al* (2003:84) put the realist ontological perspective this way:

It is necessary to explore the subjective meanings motivating people's actions in order to be able to understand these... [the] role of the interpretivist is to seek to understand the subjective reality of those that they study in order to be able to make sense of and understand their motives, actions and intentions in a way that is meaningful for these research participants.

Facts cannot speak for themselves; they are selected, and meanings interpreted, as Easterby-Smith *et al* (1991) argue the realist ontological perspective is then associated with an interpretivist viewpoint based upon a social constructionist epistemology. Only after conceptual definitions and causalities are established are hypothesis testing and other positivist epistemologies relevant. This is the first research into how BWCs are interpreted by police officers in an Arab and Islamic culture and context; its epistemological stance is interpretivist, validity (in the sense of useful and honest, not ‘the’ truth) is created by triangulating dataset and research from other contexts, giving a rich vein Godfrey and Hill (1995) propose is the best possible support for interpretations. This epistemological stance is subjective in the sense of interpretations could be different; all the social researcher can achieve in exploratory research as Saunders *et al* (2007) note, is reasonable subjective conclusions given the totality of the research context. Doing so they go on to argue requires an empathetic stance since

the researcher becomes part of the process, necessarily so if the rich and multi-faceted complexities of the research context are to be appreciated. Of course, as Pettigrew (1997) and many others then note, it is up to the researcher to detail what precautionary measures are taken to avoid researcher-bias and confirmatory-bias if any generalisability is proposed. This is perhaps why social scientists, especially those taking an interpretivist epistemological stance need to spend time discussing method.

4.1.2 Research Approach

Researchers such as Bryman (2015) reserve the term mixed methods for the combination between qualitative and quantitative methods, other such as Gilbert (2008) take a more common-sense approach, which I agree with, to include the mixing of method striving for added confidence in results, regardless of whether qualitative or quantitative. Effectively, this viewpoint draws researchers towards triangulation between cross-sectional datasets, diverse data gathering techniques and careful reintegration with previous empirical research. Silverman (2001) suggests such an approach is justified provided it suits the research questions. This is the case where, especially the ‘how’ and ‘why’ second and third research question.

Precision in the sense of numbers is illusory if based on uncertain definitions of terms and/or uncertain boundaries or causal relationships: physics-envy can lead to research conclusions with the appeal of internal exactitude yet external irrelevance (Van Maanen 2000). Qualitative research is an umbrella term for techniques where veracity flows from typicality rather than size of sample (Miles and Huberman 1994) and techniques of interpretation decoding meanings from rich data (Pope and Mays 2000).

[Qualitative research uses]... *an array of interpretative techniques which seek to describe, decode, translate and otherwise come to terms with the meaning, not frequency of certain... phenomena in the social world.* Van Maanen (2000:9)

Various termed *deep* (Seilder 1973) or *holistic* (Rist 1977) as Gummesson, (1992:15) argues it is the interconnectedness that provides qualitative method with believability – coherence. Additionally, narrations and observations (two methods adopted here) capture sequencing of events as opposed to the still picture snap-shot of a quantitative survey; they are ideal as Pope and Mays (2000:42) for investigating ‘why’ questions.

Following Easterby-Smith *et al* (1991) this research mixes method using interviews, observation and critical incident narratives.

It may be argued that especially given this qualitative approach the mix of methods should include an international comparison, and this is a point on which I reflected, especially given that my research was conducted from a UK base and I believe access to a UK police force was possible. Yin (2003) and Gilbert's (2008) observations were particularly helpful. To be meaningful an international comparison must deeply portray each culture and context in order to isolate, as far as possible, other variables than those (BWC) under investigation. Consulting Hammerich and Lewis (2013) and others on this led me to conclude that an international comparison would sacrifice depth into the Arab and Islamic influences in the Abu Dhabi context and culture. I decided to add the topic to a (long) list of future research and focus on qualitative research only in the Abu Dhabi setting.

4.1.3 Abductive Approach

The great Islamic scholar Avicenna (980 –1037) was amongst the first (perhaps the first) to see that inductive and deductive reasoning do not need to be alternatives. As Black (1997) shows writing at a time when logic and philosophical sciences were undeveloped in Europe, Avicenna was arguing that arguments can be necessary, contingent or impossible and that contingent and demonstrated proof always requires both. In doing so he avoids the inductive fallacy (tomorrow will be like today) and the early Platonic in-the-mind deductive logic prone to syllogisms the value of which relies on predicated assumptions. Avicenna's flying man was an innovation in understanding reasoning: (the flying man without sensory data i.e. inductive data cannot deduce the nature of his being). As Adamson (2013, 2016) and Gutas (2014) show, Avicenna combined practical science, experimentation and data gathering with deduced theorisations, which he iteratively tested against data: abduction. He set himself the discipline of Occam's razor i.e. eliminating unnecessary ideas or data to move as quickly as possible from question, via data and ideas to a statement of belief. The strength attached to belief for Avicenna, contingency, depending on the reasonableness of the ideas and nature and amount of evidence. This research employs abduction as the basis of reasoning.

As Peirce (1955) and Dubois and Gadde (2002) argue, abduction enables the researcher to create and test theory and by iteration with data refine the original intuition into more justified and coherent theory. As a serving police officer in Abu Dhabi, I came to this research with pre-understandings and opinions on BWC: intuitions for which I had no scientific evidence base. Research processes allowed these intuitions to be tested against data and refined as concepts and causalities were refined, challenged and re-envisioned: the processes of abductive reasoning to which Powell (2001; 2003) refers. Applying multiple methods of data gathering supported abduction in the same way that cross-case analysis does for Eisenhardt (1991); it clashes data, disputes meanings and forces refined thinking creating as Eisenhardt and Graebner (2007) delineation, new constructs and sub-sets. Abductive reasoning sits naturally with Engeström's (1999) *expansive cycles of learning* included in my analytical framework – every event and causal relationship poses another 'why' question.

4.1.4 Strategy of Enquiry

This research is an exploratory study, appropriate as Bulmer (1977), Bryman and Bell (2007) and Sekaran and Bougie (2013) suggest where concepts and causalities are emergent: the actors are amending the script as the drama is rehearsed. This is quite different from a descriptive study, since the 'how' and 'why' research questions require interpretations of causalities. While ethnographic in some data gathering techniques (observation and narratives of incidents), this occurs in a structured setting (Abu Dhabi Police) not an outsider observing, which as Delamont (2004) notes can be problematic. This study is not a new frontier ethnographic study, since I have spent twenty years working in the context and 38 years living in the culture.

The framework (section 3.7) built from a critical analysis of the literature guides the data gathering and analysis in this research on BWCs. Since the study has clear boundaries, it can be considered as a story with a point, a real-time exposition of events emergent interpretations leading to a clearer set of interpretations. In short, the study could be considered a case study in Yin's (2003, 2009) sense. Yet, case study is not a method of inquiry, it is rather a discipline with which to gather and present data. I consider this research strategy to be exploratory rather than a case study for two reasons: firstly, though a single shot case study is defensible (Yin 2003) it attracts limited generalisability and my hope is to inform BWC policy discussion in other Arab

contexts and to make sense of technological innovation in the UAE Islamic context. Case study theorists such as Eisenhardt (1989), Pettigrew (1997) and Yin (2009) all recommend multiple case studies, which as the previous section notes mean an international study with loss of depth. Secondly, data presentation here is predominantly guided thematically (the framework-1 themes) and not aimed at a coherent story with a beginning, middle and end since interpretations of BWCs in Abu Dhabi are far from ended.

Although Yin (2009) suggests that case studies can be exploratory, descriptive and explanatory it is difficult to reconcile the need for coherence and believability of a 'story' with an exploratory where the story is yet to be written. This research takes themes as the first-order structuring in data presentation and analysis from an exploratory study perspective where concepts and causalities are emergent. At a later stage in further research I hope to write a case study of BWCs in Abu Dhabi; the time is not yet. As Sekaran and Bougie (2013:96) the exploratory study is relevant *when some facts are known but more information is needed for developing a viable theoretical framework*. Following Charmaz (2006) it is intended that framework-2 following data analysis will become this *viable theoretical framework*.

4.1.5 Levels and Unit of Analysis

As Davidson and Wiklund (2001) clearly state, unit of analysis refers to the level of aggregation at which analysis is conducted, not the level at which data is gathered. Here data is gathered from individuals (interviews) and groups (observations and critical incident narratives), analysis however is at the level of the Abu Dhabi Police through the lens of the occupational cultures. It is possible to introduce multiple units of analysis such as UAE, Abu Dhabi Government, police occupational cultures and individuals), this is not my intention. Occupational cultures are used as a lens, the target and unit of analysis is the Police in Abu Dhabi, though not as a formal organisation, this is not policy or organisational change research, rather an exploratory inquiry into how Police as a group interpret BWCs in Abu Dhabi. *Police in Abu Dhabi* for the purpose of this research refers to the collective of police officers and is the unit of analysis.

By way of summary, this section has outlined the methodological choices taken in this research, justifying choices against alternatives and where possible seeking

legitimation from research methods theory. In summary, this research takes a realist ontological perspective with a socially constructivist epistemology, mixing a range of qualitative methods and using abductive reasoning as an exploratory research in to BWCs at the level of Police in Abu Dhabi, I turn now to the research questions.

4.2 Research questions

Two aims guide this research: (1) to investigate the attitudes of police officers of body worn cameras in Abu Dhabi, including making practical suggestions to improve the introduction and use of BWCs and (2) to document the effects of body worn cameras usage and relate them to theories. Pursuing these aims, three research questions (RQs) have been selected.

RQ-1: What effects does the introduction of body worn cameras have on police officers in Abu Dhabi?

RQ-2: How do police officers, working in the occupational culture of Abu Dhabi Police interpret the introduction of body worn cameras?

RQ-3: Why are these particular interpretations reached and other interpretations discounted?

This section justifies and explains these research questions from three viewpoints: firstly, selecting a what, how and why question, following Silverman's (2007) advice, is appropriate to deep (PhD level) research which seeks to add insight to a body of knowledge i.e. add analytical and theoretical understanding not simply cumulate addition description or data. Secondly, conclusions to Chapters Two and Three reveal a variety of gaps in the existing literature which include reach (no research on BWCs in an Islamic and Arabic culture and context), in fact a predominance of US and UK settings; and little research on police officer attitudes and interpretations of BWC and instead a concentration on policy and citizen's perspectives. Thirdly, the three particular three questions chosen, especially RQ-2 and RQ-3 might have been differently constructed and need justification against alternatives. This section addresses these three points in turn.

Silverman's (2007) what, how and why questions advice resonates not only with PhD regulations and standards, it draws attention in the 'what' aspect to beginning research h with observable events and actions; in this case the 2012 introduction of BWCs and

how police officers were trained in their use, their effects on Police work at street level and juridical procedures and observable impacts on relations within occupational cultures and between levels of police hierarchy. RQ-1 maps the field, creates a picture of the state-of-the-art from which to deepen interpretative analysis for the second and third question. Bryman and Bell (2007) refer to *find out what's going on* i.e. in terms of figure-1.1, what does the field of inquiry look like and are definitions and concepts from previous empirical research such as Jennings (2014) appropriate?

As the conclusions to Chapter-3, summarised earlier in figure-1.1 suggest, while there is considerable research on policing, its occupational cultures and technology used, little of the research addresses the social construction of privacy and security by surveillance Chapter-2 revealed as part of UAE's Islamic and Arabic context and culture. Indeed, significant elements of UK and US research isolate policing from context and culture. RQ-2 asking how Officers interpret BWCs adds to the small body of literature taking the Officer's perspective and breaks new ground in looking at BWC interpretation in an Arab/Islamic context and culture, opening the way for RQ-3 which uses the new framework to consider how these interpretations are influenced by learning in the Police organisation and its culture and context. It would have been possible to take a psychological perspective on attitude formation for RQ-3 instead of the learning perspective adopted. This was rejected since my concern is not attitude formation but rather interpretations in use and meaning of the BWC technology i.e. the interaction between the social and technical rather than psychological interiority.

In summary, the chosen three research questions address significant gaps in the literature (figure-1.1), look promissory for adding to theory (framework-1) and align with concepts and formulations found in relevant literature such as learning, complexity of technology, social shaping, sociology of criminology and occupational cultures.

4.3 Research Design

Determinism is the ever-present danger in social research taking various forms some insidious, it is a product of Enlightenment thinking that there are underlying rules or antecedent states of affairs and forces or trajectories result in necessary outcomes (i.e. not contingent and could not be otherwise). Extreme or 'hard' determinists (pre-determinists) extrapolate the present and future from past events or plans. Softer

determinists (Vargo and Lusch; DiMaggio) refer to (for example) organisational logics claiming compatibility with free will. Archer's (2003) solution to the agent-structure issue suggests that while institutions influence behaviour, it is patterns of behaviour that create institutions. This is the perspective of Glaser and Strauss (1967) who introduced grounded theory (GT) as an alternative to what they regard as determinism in social theory taking three forms: (a) de-centring active agency making people the puppets of circumstance; (b) the presumption that social explanation must adopt one of the 'big' theories (Marx, Weber) and the explanatory power of 'forces' they feature (class, religion/bureaucracy). Glaser and Strauss (1967) also, (c) positioned GT in opposition to (US-dominated) social discourse confined to positivist methods deducing trajectories (directions of travel) or confirmatory research.

As Paul Ricoeur (1977; 1995) argue, while one can never know what lies down *paths not taken*, do know they exist and situated rationality should justify why other routes were taken. This section justifies a research design guided by constructed grounded theory (CGT), which Charmaz (2006) developed from Glaser and Strauss' work.

GT research design gathers data, which is then thematically coded and only then i.e. without a prior literature review, related to previous research (Glaser 1978; Strauss 1987; Strauss and Corbin 1990, 1998) the idea is to generate theory unencumbered by what might prove to be the deterministic presumptions in 'grand' theory or the conceptual framework from previous research.

Joint collection, coding and analysis of data is the underlying operation. The generation of theory, coupled with the notion of theory as process, requires that all three operations be done together as much as possible. (Glaser and Strauss 1967:43)

Pointing out argues that all research has an implicit or explicit *point of departure*, framing issues, citing metaphors and meanings i.e. it constructs a lens through which to examine a problem. CGT adds this construction to GC by way of reviewing literature and arriving at a framework-1 used to structure data gathering and analysing following which as a theoretical innovation a framework-2 emerges, which adds to the previous body of knowledge. Bryman and Bell (2011) recommend using CGT in exploratory research. Framework-2 in CGT offers what Llewelyn (2002) terms intermediate level theory, theory of limited rather than generalisable application.

This research takes CGT as a research design guide noting that avoiding determinism and insisting upon active agency comes with costs: (a) carefully constructing framework-1 from themes emerging from previous literature; (b) gathering and analysing multiple datasets triangulating with these themes and others arising from coding in analysis and (c) triangulating results (empirical and conceptual) with previous literature in order to create the framework-2 contribution.

It was decided that three datasets were appropriate to answer the research questions: observing Patrol Officers and their use and interpretation of BWCs, viewing critical incident videos and recording Officers' interpretation of the impact of BWCs and thirdly interviewing Patrol and a selection of Senior Officers and administrators. This order of data gathering appears logical: observe first and then gather respondents' interpretations. This then is the order in which the data was gathered and the order in which method is discussed here.

4.3.1 Translation

Translation of interviews, observations and narratives from Arabic into English for transcription and coding is a major task, when faced with 100,000 words of data and yet the research methods literature pays it scant attention. Gilbert (2008) and Sekaran and Bougie (2013) do not mention translation and Bryman and Bell (2011) offer one paragraph in which they advise back-translation. Yet language use and meanings are a major issue as Holliday *et al* (2004) note in their study of *Inter-cultural Communication*. Alberto Manguel (2006; 2008) uninhibitedly views non-literal translation as one of the major challenges and delights of inter-cultural study, particularly as Lakoff and Johnson (1980) metaphoric thinking; which they term *quotations from our ancestors*. As Polkinghorne (2007) argues, unless translation of meanings is close then bias, and loss of nuancing is inevitable, Temple (2008) echoes the same points. Taking Polkinghorne's advice the procedure I adopted was: (a) to translate myself, (b) I paid a professional translator (Helen Annmichael) to check my work and (c) I discussed the final English draft with her ensuring that the intended meanings were accurate, and words and phrases consistently used. This is a short paragraph in a long PhD thesis, however the work involved was enormous, perhaps four months of work and considerable cost.

4.3.2 Stock-taking and sign-posting

The first sections of this chapter (sections 4.1 to 4.5) addressed the methodological decisions taken to guide this research and section 4.2 justified three research questions noting theoretical and empirical gaps in the literature. Section 4.3 argued that CGT is an appropriate guide to research design overcoming the challenges posed by determinism and absence of active agency, by grounding theorisation in data, structured by a framework-1 based on themes from previous research. At this point the chapter turns to the more prosaic areas of method: from whom to gather what data, using which method and how then to manipulate the data, present and analyse it. Instead of structuring the following discussion functionally (gathering, presenting, analysing etc), I decided to take each dataset as a unit and explain from beginning to end the method. While this approach has the disadvantage of not discussing each function only once (e.g. all analysis in one place), I judge the advantages greater e.g. taking one dataset and showing from start to finish the methods used to arrive at an evidence trail. The following three sections, (4.4; 4.5 and 4.6) consider in turn three dataset constructions: from observation, critical incident narratives and from interviews. Subsequently, the chapter concludes by discussing validity and ethics.

4.4 Observation study

Having gained the permission of the General Commander, I spent three months observing Patrol Officers, their use and interpretations of BWCs. This section details and justifies the choices made in gathering data from these observations.

4.4.1 Why Observation, what type of observation?

Whereas interview data allows the researcher to make inferences about behaviour (my interview dataset), ethnographic study witnesses behaviour, allowing researchers to make making interpretations (this observation dataset). My third dataset (critical incidents with BWCs) allows respondents to choose the incidents and interpret the influence of BWCs.

Observation is a type of ethnography, which in turn has its origins in anthropological studies, such as Mead's in Samoa; unlike such studies ethnographic study is systematically recorded and often shorter. A recent successful ethnographic study is Wenger's (1998) year-long study in a US insurance company claims department, from which he developed the idea of communities of practice. Goffman's (1961) classic

studies led to the idea of symbolic interactionism. He was quick to point out (public places) that understanding context is essential to attributing symbolism. Having worked for twenty-years with Abu Dhabi Police, I bring pre-understanding of context, though as I discuss below, pre-understanding can be accompanied by bias. Foucault (1971) suggests that his Algerian ethnographic studies revealed *regimes of truth* again emphasising the importance of his pre-understanding as a way of avoiding the misinterpretations Mead and others made (superficial).

Hammersley and Atkinson's (1993) exhortation to *go there and find out* while a useful motivation for ethnographic study needs careful framing: as numerous authors point out, without contextual understanding and carefully grounding of interpretation of behaviour and symbolisms, the accusation of alerity, (the otherisation of *cultural others*) awaits (see advice in Hammersley *et al* 1995; Gold 1997; Madison 2005). Protecting against superficiality and misunderstanding requires careful forethought, conduct and reflexivity.

Bryman and Bell (2011: 446) suggest observation studies are as a consultant, confidant or apprentice; of these, *confidant* is closest for this study, since (following Parker 2000), opportunities were sought not only to observe behaviour but also listening to how the Patrol Officers interpreted BWC influence on events and behaviour. In this, I follow advice of Fletcher (2002) to create a non-threatening comfort zone in which participants felt able to articulate their interpretations: advice also given by Collinson (1992) and Delbridge (1998).

Structured

Rosen (1991) makes the valid point that an observation study in the context of an organisation which has privileged goals is quite different from observation in a looser social setting. This observation is then structured to reveal how Officers on patrol interpret BWCs. Following Sanders and Hannem's (2013) informal discourse, guided by theoretical sampling principally (a) did BWCs effect behaviour and in what ways and (b) how did the Officers interpret BWCs. Following Vito *et al*'s (2015) advice, given the challenge of observing and noting, influencing the direction of conversation and the limited opportunities for questions was kept simple with only the two questions, which I returned too with every set of patrol Officers.

Participation

The observation study was as a non-participant observer, following Becker's (1958) classic study. As a Senior Officer, patrol Officers may have deferred judgements to my own, thus distorting behaviour. They understood that under no circumstance would I participate in decision-taking or actions. This in itself meant observation was overt rather than covert, which was not an option given my official position; also, outside of special circumstances would anyway be a serious breach of research ethics (Cook 2005:175).

4.4.2 Sample and access

Sample

Abu Dhabi Police Department serves a population of 2,657,026 scattered across 67,340 km², 80% are migrant and 20% indigenous mostly living in Abu Dhabi or Al Ain. Stations with high call out rates were selected to give a maximum of relevant observations as practice followed by Parks *et al* 1999), noting that this biases the police activity towards areas of entertainment. Shift patterns vary, two of the chosen Stations work a seven-hour, three shift patterns: 23.00 to 07:00, 07.00 to 15:00 and 15:00 to 23:00. In the third Station the shift pattern is 20:30 to 06:30, 06:30 to 14:30 and 14:30 to 06:30. Observations circulated between Stations and shift to give equal representation.

Access arrangements

Having gained access permission from the Commander, I prepared a short summary of the research project, which each officer received. The brief invited any officer not to participate, none demurred. In total thirty-two officers participated.

During the 3-months observation, 42 hours per week was spent accompanying one of the three-patrol shift (morning, afternoon, and evening). In some shift Officers altered, rotas being set by Duty Sergeants.

4.4.3 Observation data gathering and presentation

Each active service officer has a unique identity (e.g. ASO-O/n), which was used scrupulously. Down-time between incidents was reserved for steering conversations

around to my two thematic questions. The possibility of visual ethnography (Bryman and Bell 2011:463) and audio recording Gilbert (2008:471) were considered as an alternative to cumbersome and less reliable note taking. However, the first one was discounted since the intrusion would undoubtedly have affected Officers' behaviour and inhibited the expressions of interpretation.

Policing can be dangerous. Prior to each patrol, I attend the briefing, noting any particular places/events expected of the patrol and taking instructions from the Patrol Leader on my role, such as a particular observation point. During patrols, again Patrol leader gave instructions on 'standing back' or avoiding risk.

Three tools were used to record enacted or reported interpretations relating to BWCs on patrol: the ride instrument, recording and note-taking. The ride instrument (based on McCahill's (2002) observation schedule is a formal record of what occurs: which Officers are present, places visited, actions taken, conditions, distribution of time, start and finish time i.e. a picture of what the Officers did on shift.

Notes are observer impressions of what occurs. Following Lofland *et al* (2006) field notes include: (a) sequenced and time list of events (avoiding in-field analysis), (b) memo-ing past or current events and interpretations, (c) impressions of conduct and use of BWCs at the time, for later analysis, (d) use of BWCs by each Officer and differences between usage patterns, (e) points to follow up in discussion or investigation, including points on method, and (f) difficulties encountered gathering data such as failure of individuals to discuss or difficulties observing behaviour. Some notes were low-inference (simple facts) and other high-inference i.e. my own deeper interpretations of behaviour or statements.

4.4.4 Observation data analysis, validity and generalisation

Section 4.7 below details the coding of written data (notes) from observations. Since I am a serving Officer, known by and myself knowing many of the observed Patrol Officers, addressing person bias is an important question arising from this method of data gathering. Classically Skolnick (1966) described the occupational culture of police as a *leery of outsiders*. It is possible then that the observed Patrol Officers altered their behaviour in an observation setting – much like the Hawthorn effect. In this case

Officers may act more carefully, by the rulebook, perhaps leading to a distorted view of their “normal” behaviour. I agree with Mastrofski *et al* (1998) that the observation effect will be less when the observer is trusted, which is the case here. Also, it is worth noting that it is their use and interpretation of the BWCs that I was observing not their acumen as Officers.

Could my position as an Officer introduce bias in my interpretations? Gilbert’s (2008) answer is how could it not in the sense that we bring out values and *Gemeinschaft* not only to research but also to any social activity. The point is to acknowledge the potential bias openly and in reflexivity on results and analysis to be *leery* of insider bias.

4.5 Critical incidents: data selection, gathering, presentation and analysis

There is little to guide researchers on using critical incidents (CIs), yet organisations such as the Police use them frequently in training, for example asking the “what would you do now” question having put a videoed critical incident on hold. As figure-4.2 mentioned, this research uses video evidence from twenty-four critical incidents selected by CID Officers to demonstrate the use and meaning of BWCs. Each CI has a story within a story: firstly, video footage from an Officer’s BWC of what s/he found at an incident and secondly, the recorded narrative of the Officer’s interpretation of the role BWCs play at the incident. It is this latter data, which is subject to narrative analysis in this research.

Some of the interviewee transcripts read ungrammatically in English. Principally, this is because they read ungrammatically in Arabic. I have retained the original ‘voice’ of the interviewee as being authentic, believing that correcting their grammar in some cases alters the meaning of their evidence. This approach applies to all statements from interviewees and not only those from critical incidents.

4.5.1 CIT: choice and alternatives

Critical Incident Technique was developed by Flanagan (1954) to record respondent’s interpretations of lived-world events, a method used for example by Turcan (2006) and Cope (2006) in business research on complex decision-taking or Law and McLeish (2007) civil disturbance action research. The typicality of the CI is controlled by the

respondent, who in this case was asked to provide examples from their CID policing – I had previously received permission from the Commander to view the BWC footage and interview the officers, subject to confidentiality view-only access to the video footage.

CIT was selected as a means of checking the validity of data from interviews and observation. An alternative means towards the same end would have been a Delphic Panel, the purpose of which is given information and data to gain expert opinions (Bryman and Bell 2011). I was concerned that non-UAE experts may cloud issues relating to culture and context and therefore decided that the CIT technique was superior in this case. I took notes during the viewing of the footage and then asked the Officers in their own words to explain how they interpreted the impact of BWCs on the policing processes.

In this case, both in the CIT video and explanation afterwards, the interviewee in addition to case selection, also controls structure and language. Geiselman *et al* (1985) terms this approach *cognitive conversation*. Originally a technique used by the New York police, the interviewee is asked in general terms to explain what happened, without the interviewer disclosing or imposing any time/place structure or cast of actors and artefacts. Thus, interviewees select causalities, including reflexivity on motivations and intent: the comprehensibility of the incident is entirely in the hands of the interviewee. Miller (2000) employs a similar technique, which as Cope and Watts (2000) suggest is more revealing when applied to an incident than a crisis, since the latter may distract attention from the purpose of the interview.

4.5.2 CIT data gathering

Having approved access to the CID section, I asked Officers to select from BWC videos, incidents they believe demonstrated issues associated with its use. After watching the videos together, I recorded their narrative of what had transpired and their interpretation of the influence of the BWC. Having asked the CID Officers to identify CIs, they suggested thirteen. Although a higher number than my preference, being unable to choose which to deselect, I agreed to include all thirteen in the study.

4.5.2 CIT data analysis

Following Turcan (2006) interview data is then constructed into a chronological table and then data reduction and narrative analysis progress symmetrically. As Miles and Huberman 1994:11) note, *Data reduction is not something separate from analysis... (It) is a form of analysis that sharpens, sorts, focuses, discards, and organizes data in such a way that “final” conclusions can be drawn and verified.* Narrative analysis seeks coherence and believability (Gilbert 2008); this is based on relationships between agents and events (Pettigrew 1990), which as I will show reveals subjective intent and previously unarticulated attitudes, in this case, towards BWCs. As data is reduced and a clear narrative emerges, I was able to identify, as Eaton (2010) recommends, primary and secondary themes evidence in the video data.

4.5.3 Coding and presentation

Interviews with Officers on the CIs were included as a separate database in the NVivo bank of data and subject to the same processes outlined in section-4.4 above. The data is presented under the thematic headings chosen for Chapter-5, see section 4.7 for details of coding. The seven major themes arising from NVivo coding are as follows.

- Theme-1 P2C behaviour (two-way)
- Theme-2 Changing occupational culture i.e. P2P
- Theme-3 Power and hierarchy
- Theme-4 Policing processes (back office stuff)
- Theme-5 Emotions: learning/attachment/touch-points
- Theme-6 Practice shaping interpretation
- Theme-7 Social culture: Islamic/Arabic

As details of coding (see Appendix) show, each code is broken down into a range of sub-codes.

4.5.4 Analysis of critical incident interviews

The aim of this third dataset was primarily to test against the world of practice what interviewees had said, and I had witnesses in my own observations, being aware of the serendipitous nature of incidents in police patrols i.e. citizen's actions draw police presence, CIs presented the opportunity for Officers to choose what they view as CI influenced by and therefore influencing their interpretation of BWCs. Note that analysis is not of the citizen ethnographic event; it is of the Officer's attitude to BWCs as shaped by the event. CIT is similar to Granovetter's (1985) deployment of vignettes

though in that case and other similar, the Researcher chooses events as typical. This is also the case in real-life constructs, the method outlined by Lapsley and Llewellyn (1995). They point out the difficulty facing Researchers in thematising the real-life constructs in order to gain comparability. In the case of CIT, since the Officers choose incidents they believe help their own interpretation of BWCs, this becomes the theme and gives comparability.

Analysis of the critical incidents uses two methods. Firstly, the data in written form is included in the NVivo text and features in the overall qualitative analysis. In addition, inter-textuality is introduced by also commenting upon the videos of the incidents as narratives. Following Riessman (1993) and Gilbert 2008:Chapter-21) in each case I explore the coherence of each incident video for coherence as a narrative; thereby adding to the written text comments relating to the believability of the Officers' stories and the emotions and gesturing with which the story is presented. An added dimension of data-integrity is thus introduced for the critical incidents, since as Galasinski (2000) points out, the validity of the narrative like a novel, is primarily internal: does the story convince? Videos viewed of incidents chosen by Officers to illustrate interpretations of BWCs and subsequent stories, add this new dimension.

4.5.5 Summary of critical incident method

In summary, critical incidents are BWC videos chosen by Patrol Officers to illustrate the use of BWCs, which they subsequently interpret in interviews. Analysis is inter-textual: written text from the interview narratives (see section 4.7 below) and discussion of behaviour shown in the incident videos.

4.6 Interviews: data selection, gathering, presentation and analysis

Figure-4.2 summarised the thirty-eight interviews conducted in this research, thirty-two of which are patrol (or prison) Police Officers wearing BWC in their regular duties. This section justifies the choices made in gathering interview data from Police Officers, Senior Officers and administrators.

4.6.1 Why interview, population and samples

As a Police Officer used to talking with other Officers on a daily basis, I decided to firstly gather data using interviews: it is a technique well-known to Police Officers and promised a large amount of data quick, since access arrangements posed little difficult

given the official approval of my research by the Commander. As Bryman and Bell (2011) suggest, interviewing can be a fast track to data.

In an Arab context interviewing means face-to-face (F2F) meeting. Returns from self-completed questions break the cultural code that if you want a favour, you ask personally. Additionally, my aim was to gather qualitative data on attitudes; doing so requires a trusting relationship. F2F interviews, in this case have the advantage of eliminating bias from non-return, since every single person I selected for interview agreed. Official endorsement and my position as Police Training Manager undoubtedly helped. I choose to cover similar ground in each interview allowing comparability and analysis by classification, however with an open semi-structured design, enabling me to elicit further comment or examples where appropriate. Each element of this approach follows recommendations in Gilbert (2008).

Official endorsement and chosen unit of analysis made a population of some 1,500 Abu Dhabi Police Officers available. I decided to focus on Officers (a) in the Khalif Station, which serves the all communities mostly Emirates; (b) the Alshabiya Station serving also all communities mostly migrants; and (c) the Social Support Centre team covering the whole island. Typicality is paramount in qualitative research and this sample is representative of Officers using BWCs. Having decided to interview eight Officers from each group, I realised that as the largest station Alshabiya has a larger Management Team (and is the busiest Station in terms of crime), I therefore added four Officers. The Social Support Centre team contains one-third women Officers and I distributed the sample accordingly.

Literature emphasises the importance of Police Support services attitudes and use of BWC, therefore from a theoretical sampling view (Bryman and Bell 2011) an interview was arranged with the Public Prosecutor (PF); a staff member and Senior Manager in the Information and Communications Systems section (ITS); two similar staff in the CID Visualisation support section (CI) and a Senior Manager in the Strategy and Institutional Development Centre (SID). Having realised that Officers in the Prison Department were also using BWCs (these are a somewhat isolated group), interviews with three Officers and their Senior Manager were arranged. In total thirty interviews, all of which were conducted during January and June and Z in 2016 at the offices at

which the respondents work. Figure-5.28 lists the sample. All interviews were recorded and later translated and transcribed. In accordance with the University of Salford Ethics, before each interview respondents signed a consent form (see Appendix for an example) and were reassured about anonymity and informed that at any time they could discontinue without giving reasons; none did.

4.6.2 Semi-structured interview design and pilot

Gilbert's (2008) advice was followed in designing the semi-structured interview guide, though I knew Officers would be intrigued and supportive of the research and therefore could extend the number of questions to nineteen, which I calculated occupied about 70 minutes. While Officers are used to interviews, in Arabic culture it is unusual to ask non-family about attitudes. I therefore avoided the temptation to use Likert scales (or similar techniques) and designed the interview prompts for purely verbal responses making this easier by avoiding double-barrelled or personally sensitive questions, balancing question openness with the privacy culture.

Following Bryman and Bell's (2008) advice to follow a structure logical to the respondent, the semi-structured guide is in three sections (see Appendix for example): firstly, some short socio-demographic information on the respondent, limiting this to show that anonymity was protected. Secondly, a section on the BWC technology and attitude towards its use in policing covering also their attitude towards training and Abu Dhabi police policy and their potential improvement. A third section explored how the Officer saw BWC operating in their police-citizen interactions and its subsequent use. The question sequencing was intended to build up trust from the respondent, anticipating that third section would get the fullest responses and perhaps cameo examples from practice. Questions on attributes, behaviour, attitudes and beliefs meant the interview guide design followed Gilbert's (2008) advice.

On 8 January 2016 at firstly at Alshabiya and then at Khalif Stations, I piloted the interviews, the entire interviews being in Arabic. As a result of the pilot three phrases were altered to avoid confusions and question-7 was added i.e. policing before and after BWC, which arose in both pilots. Having amended the interview guide, interviewing began. Note that after formal introduction and attesting, UAE PO's training covers police law and then a range of practical skills. Interviewing (formal and informal) and

recording evidence is one of these key skills. PO training focuses on the practical aspects of gathering data without presumptive or leading questions, taking care to allow interviewees to articulate terminology, events, sequencing and consequences. Interviewing is a core skill required by all POs.

4.4.3 Interviewing, transcription and translation

Interviewing is a well-practiced skill amongst Police Officers. In this case, the only issue was judging when to ask subsidiary questions pressing for examples or illustrations of a point.

Having thanked the respondents, repeating the assurance of anonymity, I immediately voice-recorded impressions, for use at analysis stage. As section 4.3.1 noted, interviews, were immediately transcribed and translated by myself, however, I secured assistance from Helen Ann Edsforth-Michael, an English/Arabic Teacher, to assist in this work and met her (three times) to check consistency of terminology, though in most instances this was unproblematic.

4.6.4 Data reduction and coding

Upon realising the sizeable amount of data, the research would gather and taking advice from my Supervisor, I enrolled on a University of Salford NVivo course and decided to use it as a tool in coding. NVivo is an assistive tool, not itself a method for which I took instruction from Gilbert (2008) and Bryman and Bell (2011).

It is impossible to learn how to swim without jumping into the water, is one of my favourite English idioms and was applied to coding and data reduction. Interview data gathered accumulated to some 30,000 words. In July 2016 I began familiarising myself by reading all of the transcripts three times; I did this online having dropped all of the material in NVivo. At this stage the only NVivo tool used was memo-ing. Moving from familiarisation to coding, the first effort used the seven key points from framework-1 (figure-3.4): individual learning, police organisation, Abu Dhabi context and Abu Dhabi culture, adding also work identity, working practice and finally interpretations of BWCs. As section 4.7 indicates, each primary code was then disaggregated into the secondary codes.

By this time NVivo was showing seven primary codes, 23 secondary codes and 68 memos, the useable data was perhaps down to 5,000 words. Following the methods texts, memo-ing for patterns by joining up the secondary codes reduced their number to eight, with six major patterns from the sets of interviewees at which point saturation was reached. Figure-4.4 illustrates the themes and sub-codes used during this process. It was these sets of reduced data that are presented thematically in Chapter-5, structured by framework-1.

4.6.5 Interview material analysis

As indicated in section 1.6 the structure of the thesis is to present data in Chapter-5, analyse (in-case) the relationship, consistency and patterns in Chapter-6 and then in Chapter-7 to triangulate between empirical data and previous research with a view to establishing the theoretical contribution of this research based around a revised framework-2. Details of coding are given in section 4.7 below.

4.7 Coding data

This section details the coding of data using NVivo noting immediately that NVivo is a tool assisting methods of qualitative analysis: it is not itself a method. In a similar way to quantitative tools, NVivo undertakes search and retrieve of imported data, which it manipulates into sets or coded themes (nodes in NVivo parlance). Having imported all of the data, I spent considerable time simply testing the various coding routes: tree nodes, word clouds (example in figure-4.3) and coding hierarchies.

Figure-4.4 graphically illustrates the coding process in NVivo. Beginning from the left of the figure, codes were set, searched and filed based on frequency and later relevance. The first coding column to the left lists a group of 43 codes each of which resulted in relevant data (sortable by respondent and other respondent categories such as Senior Officer and Patrol Officer. I then condensed the initial coding (column-2) into first thoughts on themes, other codes and patterns. In this case, identifying patterns was the most useful added-value from using NVivo, since this exercise would have taken longer manually.



Figure-4.3: Word Cloud (NVivo)

Patterns emerged by cross-referenced between nodes and then reading and reflecting upon the results. Moving rightwards across figure-4.4 the third column is final sets of seven themes and a list of secondary codes and patterns. Column four gives more detail of the secondary codes and search items drilling into the data. During this work, I made memos of ideas (especially patterns) and ‘played’ with combinations of code and node searches. Saturation point came when I realised no new learning was forthcoming i.e. that using the seven codes I was able to fully represent the interpretative response of Abu Dhabi Police Officers to the BWCs. In summary, using NVivo I was able to prepare for the Chapter-5 presentation of data using the following seven major themes.

- Theme-1 P2C behaviour (two-way)
- Theme-2 Changing occupational culture i.e. P2P
- Theme-3 Power and hierarchy
- Theme-4 Policing processes (back office stuff)
- Theme-5 Emotions: learning/attachment/touch-points
- Theme-6 Practice shaping interpretation
- Theme-7 Social culture: Islamic/Arabic

Depth for each theme, in terms of data ordering and retrieval is provided by the eight secondary codes shown in figure-4.4 and from exploring patterns in the data, the

following six patterns, the significance of which are a result of the literature review and proposed framework-1 (figure-3.4).

- Pattern-1: Interpretative learning
- Pattern-2: BWC effecting behaviour
- Pattern-3: Culture and behaviour
- Pattern-4: Context and behaviour
- Pattern-5: Old/new practices
- Pattern-6: Management powers

Coding of data gathered and a selection of patterns in the data that references the literature review inform chapter-5.

4.8 Validity, generalisation and theorisation

This section indicates how validity, general and theorisation are envisaged in this research.

4.8.1 Validity

Truth is a tall order reliant as it is on the veracity of predications from which the truth is deduced, whereas as Cohen *et al* (2006:6) argue all socially constructivist research is creating predications and then examining what can be deduced from them. Here standard for validity is honesty and consistency as internal validity and usefulness for external validity i.e. understanding how and why Abu Dhabi Police Officers interpret BWCs as the standard. Social research is not consigned to post-modern relativism, which amounts to situated validity, instead as Silverman (2007) notes rigorous method allows researchers to go beyond internal validity, in this case suggesting that conclusions and framework-2 are useful, with the significant qualification that any generalisation must re-contextualise to allow for the specificity of the research context and culture.

Agreeing with Riessman (2008) that an appropriate external standard for social research is usefulness and trustworthiness aligns with earlier philosophy of method research such as Bush (2003) and Elliot (2005). Bassey's (1995) argument that accumulations of similar conclusions based on internally valid research add weight to conclusion is not persuasive. Examples abound. For over a century Economics as a discipline argued

that individual purchasing decisions were made after computing marginal utility and Psychology that simplistic behavioural reinforcement explained human activity. In this sense Feyerabend (1975) has a point: coherent and consistent research, unless justified by social reality and arriving at conclusions predicting outcomes lacks plausibility. Samuelson quips that Economists have predicted thirteen of the last five recessions. Gilbert (2008) makes the point that without usefulness and trustworthiness, why should society fund research? While Mishler (1990) makes the point that while internal validity is a low standard, it is better than no standard and coupled with usefulness adds up to as reasonable as acceptable a standard as interpretive social research is likely to achieve. Physics envy is the enemy of good social research and itself illusory as Hollis and Lukes (1974) points out. I consider this research valid by the standards of internal validity (honest and consistent) and externally useful. Hammersley (1992) would be content to call such research scientific, while noting how misinterpreted and even ideological that term has become. It is possible, as Lincoln and Guba (1985) propose to avoid the validity issue by using alternative terms such as credibility, transferability, dependability and confirmability, however this does not avoid the substantive issue of where on a continuum between provably false and demonstrated truth (Avicenna's terms) does the research come? In proposing an external standard for this research of *useful*, rather than *truth*, this research joins the company of Foucault (1972), Putnam (1981) and more recently Wright (2009) who suggests that truthhood is itself an unachievable standard. If this research in the opinion of others passes the internal rigour and external usefulness standard, then the author is satisfied. How useful, or generalisable the data is will depend on the subsequent use to which the research is put – its generalisability.

To be socially useful, social research must claim some degree of external validity. Apart from pointing to internal research processes, the external validity of this research relates to the context and culture in which its conclusions might be applied – in short, its generalisability, to which I now turn.

4.8.2 Generalisation

Part of the justification for a new analytical framework (figure-3.4) was pointing to the unique culture and context facing policing and BWCs in Abu Dhabi, for example pointing to the prevalence of racism in US police occupational cultures and the borderline between private and public space in western society as opposed to Arabic and Islamic societies. It is not possible to justify the need for a new framework by pointing to specificities and then ignore them and claim wide generalisability for the research results, especially so since absence of an internationally comparative study has been justified (section-1.4). What level of generalisation can be claimed for this research, might be answered with Alasuutari (1995) by suggesting degrees of generalisability? This wrongly frames the question; generalisation is not inherent in the research, instead it is a result of how others may apply and use the research. Just as it is wrong to extrapolate from (say) a racist and de-legitimate police context into UAE, so too it would be questionable to take UAE research and simply apply it elsewhere. Generalisation of all social research requires its re-contextualisation: what factors and causalities led to the research conclusion and are these same or similar factors and causalities applying in the target context? My view is that carefully used this research has resonance in other Arab countries if there is stability, high living standards and low crime rates; and, in Islamic countries similarly concerned at how imaging is captured and used. Other small countries, with high levels of police legitimacy (for example the Nordics) might benefit from Abu Dhabi's approach to police enculturation and training. Yin's (1994) point that a good analytical framework may be adaptable for use elsewhere, suggests that a revised version of framework-2 (with learning as a key factor in social interpretation of technology recognising socio-technical complexity) may prove useful in analysing public-facing service technologies, including BWCs.

4.8.3 Theorisations

Llewelyn (2003) argues that various types of theory can be developed from the variety of generalisable conclusions and frameworks possible. Theory claims do not have to be context-free universally applicable grand theory. She suggests that developing new metaphors, concepts, and frameworks can be theoretical contributions. Following Llewelyn, I suggest the contribution of this research is firstly a middle-range theory encapsulated in framework-2 showing the boundaries, factors and causal relationships explaining how interpretations of a new technology arise. Secondly, the research theorises police views of technology in an Arabic and Islamic culture and context, in short from a quite different perspective than that adopted by most research on BWCs. A section in the conclusions chapter details the theoretical publications proposed to flow from this research.

4.9 Ethics

Gunter (2012) makes the point that all social research involves ethical issues, choices and decisions since the researcher is interaction with other people. The precise nature of these issues depends as Cohen *et al* (2006) suggest on: the research context; procedures; data gathering methods; character of population and sample; and how the data is treated (including publication). To draw a parallel from policing, improperly gathered evidence is inadmissible, so too unethically gathered research data is useless.

This research has ethical approval from the University of Salford Ethics Committee and the Abu Dhabi Police Department. As indicated above, in the case of each dataset and using Oakley's (1999) there is *legitimate access* to the data in the sense of formal approval.

However, the details of informed consent are important. Each individual in each of the three groups of Police Officers gave informed consent to participate in this research and was assured of (a) confidentiality and (b) no-questions-asked withdrawal at any stage. Given and not presumed consent is particularly important when, as in this case, the researcher occupies a more powerful position in the hierarchy than most of the interviewees. Following Clandinin and Connelly (2000) I accepted a *duty of care* as a trust from each respondent. Such trust goes beyond anonymity, as Cohen *et al* (2006) suggests it includes a respect for the person and her/his opinions including their fair and

honest representation in the research. This includes secure storage. No Police video was removed from their premises and no personal data stored on Salford University's ICT system. Effort is made throughout the thesis to protect anonymity using the coded system outlined in Chapter-1. The researcher was genuinely grateful to each respondent and made this very clear during and after data gathering. It is important to note that interviewees were aware that the researcher is a serving officer in the UAE Police Department. This was made explicit by the researcher, though in a small force Senior Officers are already known to all staff.

An ethical approach to research carefully allows for gender balance. As the discussion on *BWCs and Abu Dhabi Police* (section-2.2 above) noted women Police Officers in Abu Dhabi do not normally patrol and therefore do not wear BWCs. If the samples in this research have gender bias it arises from the organisation of Police and not choices of the researcher. A sample of women Officers were included in the research: one of the Senior Officers interviewed, fourteen of the Officers observed during Patrols (women join Patrol cars when women are involved in a call-out incident) and two women Officers in the Social Centre interviews.

Lee (1993) and Lee and Stanko (2003) note that research in potentially violent situations brings a new range of ethical decisions. Part of the Observation agreement was that at incidents the Officer in charge of the Patrol dictated my observation position, meaning that at no time was I in danger or did my presence endanger Police Officers or citizens.

Following Erikson (1967), Gilbert (2008:148) and the Social Research Association *Ethical Guidelines* in Bulmer (1999) observation was open and agreed with the Patrol Officers. In Erikson's terms, I did not wear a mask; the Officers (some of whom know the researcher as a serving Officer) and status as a researcher.

CHAPTER-5 DATA

This chapter presents the data gathered using the methods detailed and justified in Chapter-4. Since data selection is itself a form of interpretation, the data is presented here with minimal comment leaving discussion on data conflicts and consistency to Chapter-6 and analysis against previous research answering the research questions, in Chapter-7. Data is presented in the chronology it was gathered, since inquiry depth built up as interpretations and themes emerged: thus, the chapter begins with data from three-months observing body worn cameras (BWCs) in police practice, then how Police Officers (POs) interpret BWC use at twenty-four critical incidents (CIs) they select as illustrative, and finally data from a range of 30,000 words gathered in thirty-eight interviews.

The chapter is structured around the seven primary themes emerging from data coding using NVivo (see section 4.7); these are as follows.

- Theme-1 Police to citizen (P2C) behaviour
- Theme-2 Changing occupational culture: police to police (P2P) behaviour
- Theme-3 Power and hierarchy
- Theme-4 Policing processes
- Theme-5 Emotions: learning/attachment/touch-points
- Theme-6 Practice shaping interpretation
- Theme-7 Social culture: Islamic/Arab

In selecting evidence, the chapter is informed by the factors shown in the analytical framework (figure-3.4), which will be used in the analysis chapter. For ease of later referencing, throughout the chapter key points from the data are listed in tables.

5.1 Observation study data

Data from an initial observation of Police Officers (POs) focuses on the use of BWCs in their practice and their comments interpreting its use. As section 4.4.3 (Methods) made clear, my presence, was consented to and under instructions from Patrol Officers. Officers knew of my position in the force. Notes of actions relating to BWCs and comments interpreting POs attitudes towards BWCs were taken throughout. Some 90% of observation with Patrols resulted in no incidents and no use of BWCs; the following is then the complete interactions between POs on patrol and BWCs over a three-month period. The section carefully differentiates (a) points articulated by POs;

(b) points observed and interpreted by the researcher. References here are to data in the Appendices using enumeration (O/day/date) for example observation on 1st November 2016 is (O.1.11). This data was coded using NVivo, resulting in the seven themes used to structure its presentation.

5.1.1 Theme-1: P2C behaviour

The first observation (O.1.11) demonstrated procedures for BWC use. Having been called to an incident involved a repeat mentally-ill citizen, who was taken to hospital, the Officer switched the BWC on recording date/time, though without recording images of the individual.

During O.2.11 the Police Officer (PO) wore the active BWC when issuing a fine for littering, later during the same shift a Police Officer used the BWC to record details of cars parked in a prohibited space and their removal, issuing fines *in absentia*.

Abu Dhabi POs attend many incidents that are not crimes. For example, O.9.11 was called to a person trapped in an elevator; to which the PO wore an active BWC while assisting Civil Defence to open the elevator and release the citizen. On the same shift POs used the BWC to record damage to a vehicle from falling masonry, though the PO did not inform the citizen that the BWC was recording.

POs during O.15.11 attended the scene of a theft wearing the activated BWC, to which they explained why they entered a property without a warrant and recorded an interview, though without notifying the citizen that the BWC was recording.

Investigating a broken cable during O.21.11 the PO failed to notify the citizen that the BWC was active. Though continuing recording while awaiting data, the PO then turned the BWC off resulting in an incomplete report. The researcher noted that P2C interaction would be more transparent if the BWC displayed 'on' mode to the citizen.

POs attending a domestic dispute on O.22.11 wore the activated BWC without informing the citizens (one of the three being a woman). The PO believes that because the citizens noted he was wearing a BWC their behaviour towards him was more

respectful than in previous similar circumstances where quarrelling families have reacted aggressively to PO presence.

Called to a suspiciously parked car during O.6.12 the PO, the BWC was only activated when the car owners returned and recorded details of the incident, including advice on parking, after which the BWC was turned off.

POs attended a petrol station during O.6.12 wearing the activated BWC finding a group of people shouting. Calming the situation, the PO was able to resolve the dispute. The PO later said the BWC was proof of his proper conduct had the situation got out of control.

During O.7.12 POs attended a family dispute wearing the activated BWC. Upon entering the home (after receiving permission) the POs were abused until they pointed out that the BWC was active, at which point the citizens' behaviour altered became more respectful towards the Police, including an invitation to tea. Afterwards the PO discussed if the BWC is to protect the policeman, the people, or protection of the policeman from himself?

Figure-5.1 summarises the results of observations relating to P2C (police to citizen) behaviour enumerated as Observation, key point and number.

Theme-1: P2C (two-way) behaviour – key points from observation data	
O/KP/1	Much of the POs time is spent attending non-crime incidents.
O/KP/2	POs record interview and evidential materials on the BWCs
O/KP/3	POs forget to inform citizens that the BWC is active (though as the pilot progressed, POs forgot less often.
O/KP/4	In citizen-to-citizen disputes, POs are comfortable the BWC records their efforts to achieve resolution.
O/KP/5	POs believe citizens in dispute situations behave more respectfully towards the Police when they know the PO is recording on a BWC.
O/KP/6	Citizen behaviour towards POs can improve when they become aware that BWCs are recording their behaviour: informing citizens of BWC activation may benefit the PO.

Figure-5.1: Summary of Theme-1 evidence

5.1.2 Theme-2: Changing occupational culture i.e. P2P

A second theme from coding related to police-to-police occupational cultural effects of the BWC for which three incidents are relevant.

The BWC protrudes on the police vest and the researcher observed, can be easily knocked off; this explains why POs take the camera off when not at an incident and also why they may forget to put it back on and activate it.

During O16.11 investigating a citizen's complaint against a service provider, a PO with BWC recorded interviews, however, a second PO investigating details of the complaint (dent in car) did not wear a BWC resulting in incomplete evidence. From this the researcher noted that it seems preferable for both POs to wear the BWC they may not do so since they may then record the other POs actions.

At a minor fraud incident during O.10.11 the PO failed to notify the citizen the BWC was recording but then proceeded only to record visual images and not dialogic evidence.

Figure-5.2 summarises key points arising affecting P2P behaviour because of using BWCs.

Theme-2: P2P behaviour (occupational culture) – key points	
O/KP/7	POs find the BWC awkward to wear meaning they take it off and may forget to activate it.
O/KP/8	Introducing BWCs requires POs to reassess joint evidence gathering to include when both need to wear the BWC
O/KP/9	POs used to capturing interview evidence may focus too much on BWC visual evidence to the detriment of traditional policing, gathering dialogic evidence.

Figure-5.2: Summary of Theme-2 evidence

5.1.3 Theme-3: Power and hierarchy

BWCs could enable Senior Officers to further scrutinise Patrol Officers. During O.12.11 a Patrol attended a vehicle that had its engine running for an estimated 7-hours. Though wearing the BWC, the researcher noted that the POs failed to treat the incident as seriously as they should have and instead approached the vehicle, later finding the owner had forgotten to turn off the ignition. Though properly wearing the BWC, the Officers actually recorded their own breaches of procedure.

During O.7.12 POs accepted that when the BWC is on and POs from other sections present, such as the CIS, they become formal and serious, which did not, to the

researcher, appear to be the case when the BWC is off. PO's behaviour in the presence of specialist POs differs as a result of wearing the BWC.

Figure-5.3 summarises key points arising affecting power and hierarchy relations as a result of using BWCs.

Theme-3: Power and hierarchy – key points from observation data	
O/KP/10	BWCs can record (previously autonomous) Patrol Officer's breach of procedures
O/KP/11	When specialist sections (including Senior Officers) are present and BWCs operational, PO's behaviour becomes more serious and formal.

Figure-5.3: Summary of Theme-3 evidence

5.1.4 Theme-4: Policing processes

The BWCs when worn show no indication to POs (other than the on/off switch) if the camera is activated. On five occasions POs failed to activate the BWC (O.1.11; O.8.11; O.10.11; O.15.11; O.21.11). This can result in loss of evidence. In O.9.11 attending dispute between landlord and tenant the PO turned the BWC off before the completion of interviews thus terminating the recording of evidence. On one occasion POs were called to a suspiciously parked car during O.6.12, the BWC was worn and statements recorded, however some basic data (time/place) was not inputted by the PO.

On other occasions evidence effectively gathered appeared to the researcher to support judicial procedures such as report writing and SCI involvement. For example, during O.10.11 a PO attempted unsuccessfully to resolve a dispute between citizens, wearing the BWC, which was then cited in the Officer's report. Attending a break-in during O.11.11 the PO wore the active BWC using it to record evidence details. Attending a motorcycle theft case, the PO wore the BWC taking statements from the owner and a citizen, resulting in a complete report. On O.22.11 POs attending an unattended car, which POs stated was parked suspiciously. The BWC recorded all details and though in this case there was no problem, the records contributed towards statistics of similar incidents.

POs on O.11.11 attended an attempted break-in wearing the BWC capturing interview and physical evidence for use by the SCI.

Figure-5.4 summarises key points arising from BWC data supporting subsequent police activities.

Theme-4: Policing processes – key points from observation data	
O/KP/12	Failure to activate the BWC (perhaps due to its novelty) or turning it off before completing evidence gathering can cause loss of evidence.
O/KP/13	Capturing BWC evidence aids complete reporting and specialist teams later involved in the case

Figure-5.4: Summary of Theme-3 evidence

5.1.5 Theme-5: Emotions: learning/attachment/touch-points

O.10.11 a Patrol attending an individual locked in a car, which contained evidence of drugs; with the BWC worn and active. The PO turned the BWC off while he broke the car window to gain entry, afterward turning it back on while the incident was dealt with. The researcher judged the PO was fearful recording himself damaging property but in doing so left himself open to a charge of not following procedures.

In discussion with POs on O.22.11 they expressed the view that BWCs also record their actions, they feel monitored and worry it could get them into trouble.

Figure-5 summarises key points arising emotional attachments and touch-points relating to BWC wearing.

Theme-5: Emotional attachments and touch-points – key points from observation data	
O/KP/14	POs may turn off the BWC when undertaking actions they fear may get them into trouble.
O/KP/15	Some POs worry that the BWC records their actions and may get them into trouble.

Figure-5.5: Summary of Theme-5 evidence

5.1.6 Theme-6: Practice shaping interpretation

POs appear to readily incorporate BWCs into their everyday practice, learning (for example) to remember to notify citizens that the cameras were recording. For example, having been called to a counterfeit currency incident on O.8.11, the PO switched the camera on, though without notifying citizens during procedures including handcuffing, with names and details recorded on camera in addition to the report.

As POs interpreted the effects of the BWCs they appeared to control their use. For example, attending a reported theft in O.27.11 the PO recorded the complainant's

statement but then switched off the BWC awaiting the arrival of the Investigation Officer. The researcher interpreted this as not wishing to waste idle time keeping the camera on. The PO turned the BWC back on when the IO arrived, recorded the interview and conditions at the crime scene and then switched the BWC off (for a second time) awaiting arrival of CSI. The complainant, a woman, was not informed that the BWC was active. The PO was choosing to turn the BWC on and off, the researcher interpreted this as perhaps relating to the darkness of the crime scene and his view that gathering clear video footage would be difficult.

During O.6.12 POs discussed the advantages and disadvantages of BWCs, noting the protection it offered Patrol Officers and record of incidents to assist in reporting. Their view is that the vest on which the BWC is worn is awkward; the BWC offers no signal to citizens that it is active, and POs need training of its use to capture all evidence.

Theme-6: Practice shaping interpretation – key points from observation data	
O/KP/16	POs switch the BWC on and off during incidents (excused by battery conservation, darkness) perhaps worrying that it records informal discourse
O/KP/17	POs identify design issues: awkward to wear, no signal to citizens of activation and vest uncomfortable.

Figure-5.6: Summary of Theme-6 evidence

5.1.7 Theme-7: Social culture: Islamic/Arab

Culturally inspired practices are often invisible and unarticulated. POs seemed uncomfortable capturing video footage of women, especially in the home and in general uncomfortable videoing inside homes, reflecting the public-private space boundary in the wider social culture. For example, during O.29.11 the Patrol was called to a reported assault and battery, with POs activating the BWC. The case involved a housemaid allegedly assaulting young children. At the request of the complainant the BWC was turned off preventing recording of the Investigating Officer's interviews. The Officer later stated his belief that the complainant did not want footage of her children recorded. Theme-4 illustrates the point that in the home, citizens clearly respond to the BWC by altering their behaviour – shifting from abusing POs to offering tea. Figure-5.7 summarises key points relating to the wider cultural setting in Abu Dhabi.

Theme-7: Practice shaping interpretation – key points from observation data	
O/KP/18	POs appear uncomfortable capturing images of women (and their children), especially inside citizens' homes.

Figure-5.7: Summary of Theme-7 evidence

5.1.8 Summary of observations

As POs become used to wearing the BWC they interpret it positively, despite awkwardness in wearing it, noting how it helps record evidence and report completion, and can beneficially alter citizens' behaviour, especially during arguments . POs behaviour towards Seniors becomes more controlled. Despite these perceived advantages, POs worry that the BWC also records their actions, including lapses in procedures and respond by turning the camera off and on. Cultural factors mean recoding women, especially in the home makes POs feel uncomfortable.

Having observed POs practice with BWC and gaining a 'feel' for their usage and interpretations, these insights helped make sense of the second stage of data gathering in which POs selected critical incidents illustrating how they interpret the BWC.

5.2 Critical incidents

Section 4.5 justifies the use of CIs in which POs select footage captured by BWC and then explain what they believe the footage reveals about BWC usage. It is their interpretation that forms the story constituting the CI, not the incident itself. Incidents were selected from Yas Police Station (cases one to thirteen) and Al Khalidiya Police Station (cases fourteen to twenty-four) between February 2016 and April 2017.

As section 4.5.3 indicated, data from interview notes with POs was coded on NVivo, using the seven primary codes selected from initial coding and the range of sub-codes emerging (section 4.7). PO's narrative analysis (focusing on coherence and inter-textuality between verbal and BWC imagery, section 4.5.2) was then used to assess the PO's interpretation of the BWC effects. Below this data is presented, leaving discussion of consistency between datasets to the following chapter (six) and analysis against previous research to Chapter-7. CI's are enumerated in the order which I

discussed them with POs e.g. the first CI is CI/1. Full transcripts of CI notes are in the Appendix.

5.2.1 Theme-1: P2C behaviour

Several cases show negotiating resolutions of disputes or fracas by POs or involvement in non-crime issues such as an industrial accident and working without permits. A new sub-theme emerges from this data: lack of training for POs using the BWCs: often only one of the two POs switches on the camera, or filming is incomplete (the warehouse fire in CI/19 is an example), or key evidence (data, time, overview of incident) is not inserted. The evidence here shows that the quality of evidence from BWCs depends on the individual PO's use of the camera, suggesting that a much better training programme is necessary to standardise the quality of BWC as evidence.

Often in policing one issue leads to another. When police were called to a family dispute, CI/23, which was resolved, they were also informed that a nearby construction site used non-permit labour. Situating themselves at an entry elevator to check documentation, several workers were taken into custody for not having the correct permits to work. The entire incident was filmed on the BWC providing, if needed, a complete record. The PO selected the incident to illustrate that the responsiveness of Patrols to issues arising is unaffected by using BWCs.

Incidents reveal a variable quality in the visual footage from BWCs. Called to a physical fracas in CI/24 the attending officers initially observed the incident wearing the BWC. Visual footage was inadequate, although the audio data captured evidence that identified individuals.

Figure-5.8 summarises how P2C behaviour is affected by BWCs in CIs. Interestingly of the twenty-four examples of CI selected by Officers, no example was chosen of BWCs altering citizen to police behaviour: the focus on the POs is on their ability to capture evidence and their relations with the Police hierarchy.

Theme-1: P2C behaviour – key points from CI data	
CI/KP/1	Quality of evidence from BWCs is not standardised, showing the need for effective PO training
CI/KP/2	Wearing BWC does not inhibit POs from following up new issues arising from call-outs
CI/KP/3	Quality of imagery from the BWC varies, at time the verbal footage is useful evidence.

Figure: 5.8: CIs with BWCs – P2C behaviour

5.2.2 Theme-2: Changing occupational culture i.e. P2P

Case CI/9 from Yas Station features four POs and eleven separate recordings relating to an industrial dispute: striking labourers' situation in labour accommodation. The first attending POs called a range of backup services and all POs attending with BWCs recorded the incident, creating a full evidential base. The PO interpreted the incident as showing cooperation, which while true fails to notice a new sphere of cooperation between POs i.e. backing up using BWCs. The incident also demonstrates the attitude of POs to migrant labourers. POs discussed with the labourers their grievances and suggested avenues for reconciliation and compromise: sensitively handling a situation that could have gone out of control. The BWCs provided POs with evidence should complaints against them have been made (this has not happened to date), it also illustrates that PO's deep involvement in social affairs is not limited by wearing BWCs.

Figure-5.9 summarises how P2C behaviour is affected by BWCs in CIs.

Theme-2: Occupational culture – key points from CI data	
CI/KP/4	BWCs provide new way of backing up colleagues during CIs
CI/KP/5	BWCs capture non-crime reconciliation activities of POs

Figure: 5.9: CIs with BWCs – Occupational culture

5.2.3 Theme-3: Power and hierarchy

Yas Station's PO Hamad selected a CI (CI/11) of a tenant dispute over contract with a landlord. Police attended, recording the incident with BWCs and concluding that settling the dispute required involvement of Senior Officers who referred the citizens to the Police Station. The incident demonstrates that POs confidently involved themselves in a civil dispute and provided Senior Officers with BWC-based evidence to help resolve the argument.

Several PO claimed that BWCs increases the need to refer incidents to Senior Officers back at the Station, however CI/17 was a lengthy physical fight incident, which offers filming and resolution by discourse on the spot, suggesting that BWC have little influence on the need to refer matters to Senior Staff.

POs from Al Khalidiya attended a suspect vehicle in a high-security zone (CI/18), using BWCs to capture evidence and taking statements. The POs followed procedures and

did not breach the security area, leading to a tightening of procedures instigated by Senior Officers, illustrating that Senior Officers are aware that some procedures need to change to take account of BWCs.

Figure-5.10 summarises how power and hierarchy is affected by BWCs in CIs.

Theme-3: Power and hierarchy – key points from CI data	
CI/KP/6	The procedural point at which cases are referred to Seniors is recorded on BWCs, perhaps reducing Patrol Officer autonomy, certainly highlighting the point of responsibility transfer.
CI/KP/7	Since PO activities are recorded on the BWCs Seniors will prescribe activities more, for example to reduce danger: Seniors will become more prescriptive of Patrol behaviour.

Figure: 5.10: CIs with BWCs – Occupational culture

5.2.4 Theme-4: Policing processes

Case CI/6 from Yas Station involved a citizen found in a critical medical condition, which POs resolved by calling for medical attention. However, only one PO filmed the incident resulting in key elements of the scene being missing, as he moved around. Had both POs filmed all of the evidence may have been captured. In not both filming, the use of the BWC evidentially was reduced.

Similarly, CI/7 shows a BWC recording only partial evidence; in this case it was a misunderstanding between citizens. The PO selected the video to show complex case evidence being captured. However, without reference to the report, it is not possible from the video footage to discern who is who in the recording, thus making the BWC film difficult to use as evidence – again pointing to the need for more PO training on how to capture evidence using the BWC.

POs attending (CI/15) incident of theft from a power station, recorded details of the theft and an interview with the person reporting the incident, however they failed to include in the recording details of time and place – limiting the use of the recording as evidence.

There are many examples of BWC being used effectively to fully capture incidents, e.g. the CI/21 case of drunk taken into custody, all filmed.

Figure-5.11 summarises how policing procedures are affected by BWCs in CIs.

Theme-4: Policing procedures – key points from CI data	
CI/KP/8	CIIs show importance of both POs activating BWCs to ensure all possible evidence is captured
CI/KP/9	POs not recording incident data (time, place, overview) can limit usefulness of BWC evidence.
CI/KP/10	Rapidly during the pilot, PO learns to use the BWC effectively, though standard of evidence captures depends on individual POs, illustrating the need for training.

Figure: 5.11: CIIs with BWCs – Policing procedures

5.2.5 Theme-5: Emotions: learning/attachment/touch-points

PO Salem from Yas Station selected cases CI/8.1, CI/8.2 and CI/8.3. In CI/8.1, a fight between citizens, POs attending could have been in danger. However, overcoming emotions they both carefully captured all of the evidence, illustrating effective partnership and cool decision-taking in a stressful situation. Salem's second CI choice, CI/82, also a physical fight, however, on this occasion, despite Salem's recommendation of the video as an effective use of BWC, the footage failed to capture the full incident. This is another example of how more effective training could exploit the advantages of BWCs. A third fight incident, selected by Officer Salem, CI/8.3, again recommended as an example of effective BWC use was also deficient in the evidence captured. In this incident and others, POs also failed to include in the BWC evidence precise details of names, time, and place and (at the end of the video) a short overview of the incident. This information coupled with PO identity (from BWC number) would give a fuller evidential base. This underscores the need for more effective training by POs using BWCs.

PO Salem chose CI/12 from the Yas Station files to illustrate how BWCs reduced his stress at work, which often involves fining drivers of illegally parked cars and frequently denial of facts and complaints against his conduct. He pointed out that the BWC videos provide objective evidence and when known to drivers they are less willing to make complaints against him.

From Al Khalidiya Station a PO chose CI/14, an arrest where the citizen resisted arrest and refused to be searched. The video evidence shows POs acting calmly, although the PO did not record incident particulars such as time and place. This video was offered as evidence of BWCs protecting POs against subsequent complaint when making an

arrest, which it did, however, had the recording also included incident data; the evidential base supporting the PO's emotional control would have been greater.

Figure-5.12 summarises how emotions and learning were affected by BWCs in CIs.

Theme-5: Emotions and learning – key points from CI data	
CI/KP/11	CIs can be emotionally stressful. At times POs under stress fail to activate the BWC or use it properly; experience and learning from practice is likely to add to PO's learned behaviour.
CI/KP/12	For some POs (CI/12) BWC have an immediate stress-reducing affect or show calmness in difficult situations (CI/14)

Figure: 5.12: CIs with BWCs – Emotions and learning

5.2.6 Theme-6: Practice shaping interpretation

CI/1 illustrates what the PO from Yas Station termed a misunderstanding, having followed procedure attending an incident with the BWC switched on, the device failed to record any of the incident and only showed live footage after the interview. Was this a battery failure or the PO turning the camera off during the incident interview? What the PO seems to me to be illustrating was the unreliability of the BWC i.e. like any technology it could fail and that the Police organisation needs to rely on its Police Officers not BWC technology.

CI/2 from Yas Station also illustrates the limitations of the BWC, perhaps deliberately contrived by the PO. The camera films at 180-degrees from the PO's chest, in this case the footage lost key evidence outside this visage (the incident involved a dispute with labourers, which went unresolved). Here the PO is illustrating that simply wearing the BWC is insufficient, the PO needs to guide the camera data capture or alternatively the evidence is incomplete. The PO is highlighting his continued control over evidence gathering.

Five CIs involved traffic management from Yas Station. In CI/3.1 two POs attended, both wearing BWCs; one did interviews while the second managed traffic, the recording showing the second PO directing traffic for over half an hour. The PO believes the video demonstrates that technology such as BWCs cannot replace the physical presence of police as exemplified by the lengthy traffic complimenting his companion PO. Two other traffic incidents were selected by POs to illustrate the limitations of the BWC. In CI/3.2 the video footage was spoiled by the Patrol car's

flashing lights, making the evidence captured unusable. The POs in CI/4.1 appeared less diligent in capturing all the evidence, again flashing lights from the Patrol car made the video unusable. Both these incidents from the PO's viewpoint illustrate the limitations of the BWC. Perhaps more profoundly, they illustrate the need for training allowing POs to become more skilled in video capture. A fifth traffic incident (CI/4.2) was a traffic accident, only one PO turned on the BWC and he failed to record key details of the accident (vehicle damage and exact location), ironically since the video was selected to demonstrate the effective use of the BWC.

In CI/16 POs attended a potentially serious incident involving a car containing explosives. The BWC though worn was upside down i.e. incorrectly installed resulting in unusable footage. While the PO selecting the incident view, this was a design fault of the BWC and perhaps design could be improved, an alternative explanation is insufficient care by the PO and inadequate training.

Figure-5.13 summarises how PO interpretations BWCs evolved in CIs.

Theme-6: Emotions and learning – key points from CI data	
CI/KP/13	BWC technology (CI/1) is yet another item for POs at CI to think about: better design of the technology (signalling on/off, signalling 'on' to citizens, recording time/place, head-worn 360-degree image capture) would help Patrol Officers. Also, the BWC technology may be designed to overcome flashing lights from vehicles by automatically adjusting depth of field.
CI/KP/14	During BWC introduction phase POs are identifying important limitations in the technology.

Figure: 5.13: CIs with BWCs – evolving interpretations of BWCs from CIs

5.2.7 Theme-7: Social culture: Islamic/Arab

The CI/5 video related to vandalism, perhaps by children, at a Mosque. As noted, the POs showed great respect for the Mosque and Imam they interviewed capturing all on the BWC; illustrating the respectful attitude of POs using the BWC in a religious setting.

CI/22 call to investigate woman citizen taking odd items into a women's salon, accompanied by women POs; taking imported goods into salon; resolved. Recording not complete but did include POs recording incident data.

Figure-5.14 summarises how wider Islamic and Arabic culture influenced interpretations of BWCs evolved in CIs.

Theme-7: Wider Islamic/Arabic culture – key points from CI data	
CI/KP/15	Since capturing images of women and inside Mosques is delicate in UAE's culture, POs respond by cautious use of the BWCs.

Figure: 5.14: CIs with BWCs – influence of Arabic and Islamic culture of BWC interpretation during CIs

5.2.8 Summary and conclusions from critical incident analysis

The following chapter (six) contrasts evidence on BWC interpretation by Abu Dhabi POs followed by a full analysis in Chapter-7. This section has identified fifteen key points relating to the interpretation of BWCs arising from critical incidents selected by POs to illustrate the effect of BWCs on their practice. It is clear that evidence gathered in part results from the ability of individual POs to use the BWC, illustrating the need for standardising training. POs selected CIs from their own perspective and did not highlight alterations in citizen behaviour towards the police resulting from wearing BWCs at CIs. From CIs wearing BWCs the POs appear too sensitive to their own emotional well-being (section-5.2.6) and the unique wider Arab and Islamic culture (section 5.2.7), demonstrating the value of analysing the technology in this context and culture, from the viewpoint of Police Officers.

5.3 Interview data

Details of the PO interview population and samples, along with approach to interviewing, translation, and presentation are given in section-4.6 above, with a justification for the seven themes used to structure this section in section 4.7 above. Italicised (non-bold) text below (often indented) are direct quotations from interviewees.

5.3.1 Alshabiya Police Station (APS)

APS Theme-1: P2C behaviour

POs believe that both they and the public behave better when interactions are recorded on BWCs. PO Khalid is clear that citizens behave differently when POs are wearing a BWC:

Yes, if there is a camera, the public behave and they don't act against the rules or in a way that will go against him. Now this is better – they respect the police officers and we enforce the law without any complications.

Mainly, POs emphasise the protection they feel against wrong accusations from the public. PO Saeed for example, faced a potential complaint from a diabetic citizen who (wrongly) claimed he had been assaulted having explained that the BWC capture the truth of the incident the citizen calmed down and withdrew his complaint. He suggests the BWC saves considerable time in reporting writing on such incidents.

Omar and Obaid joined the force fifteen and twenty-two years ago respectively, using the BWC for over a year, they suggest the BWC is *protecting us from the public complaints and false accusations*.

Figure-5.15 summarises how P2P behaviour is influenced by BWCs

Alshabiya Police Station	
Theme-1: P2C behaviour - Interview data key points	
I/APSKP/1	POs believe Police and public are better behaved when being recorded.
I/APSKP/2	POs believe the BWC offers protection against false accusations.

Figure-5.15: P2C behaviour and BWC - Alshabiya Police Station interviews

APS Theme-2: Changing occupational culture - P2P

PO Saeed is aware that he appears in his colleague's recording, making him careful about what he says and does. Once he and his partner PO viewed a recording hoping to learn how to improve recording. His partner felt that on Saeed's record he (the partner) sounded odd and expressed a desire not to use the BWC.

PO Tariq believes the BWC makes policing easier:

The camera also calms down the public when they interact with us so sometimes the public is angry and when he sees the BWC, he tends to calm down and listen quietly and this happens with me many times.

PO Tariq who joined the police in 2010 using BWC intermittently for four-years is less sanguine, believing the BWC formalises policing.

Before when I talk to the public at an incident, I feel relaxed. Some incidents we can solve the dispute between the relevant parties in an amicable manner.

After: I talk lawfully, and I transfer the report to the police station for resolving it, even if the incident subject is not worth it ... No, we work by the book – not by the spirit of the law

POs such as Ahmed see P2C behaviour influenced by BWCs.

Yes, there should be a tiny change, like the way we talk to them, how clear is our voice on the camera, the way we follow the law and rules so when we turn on the video, we should be clear verbally and visually. Honestly, it changes my personality for the better.

PO Saeed with 21 years service, has been using a BWC for three-years; he sees BWCs as protecting him if Senior Officers receive complaints from the public. He thinks that since Seniors can view the recording it and the recording of other POs: *once I saw my colleague's recording which affected my personality and which made me more aware of the need to be careful of what I say and do.* Both POs and citizens moderate their behaviour in the presence of BWCs. PO Nawaf agrees that POs behaviour to citizens and other POs is moderated by BWCs.

POs differently interpret how police culture is affected by the BWC: on the one hand making P2C relations more respectful, on the other hand formalising previously fewer formal relationships. POs actions being captured by other POs is a concern for some who's self-image is challenged.

Alshabiya Police Station Theme-2: P2P Occupational culture - Interview data key points	
I/APSKP/3	Ambiguous effects of BWC on police culture: making P2C relations easier or formalising relationships
I/APSKP/4	Some PO worry that their image portrayed in recordings by other POs fails to reflect their self-image.

Figure-5.16: P2C Occupational culture and BWC - Alshabiya Police Station interviews

APS Theme-3: Power and hierarchy

Interviews with Patrol Officers reveal their belief that BWCs significantly alter their relations with the police hierarchy and their superiors. A minority of POs such as Ali-Sh are resentful of the technology

I don't accept it as a technology – it is for the media etc. It is not my responsibility to film. There are other departments doing this kind of job.

PO Ali-Sh has sixteen years experience on patrol and using a BWC for two-years. He worries that the technology monitors his adherence to procedures, which he considers he used to be more flexible in applying.

Now, because you have the BWC, you have a lot of things to think about when you do your job, like, your procedure. The BWC reduces flexibility can result in small misunderstanding but because infringement feels can lead to charges, which otherwise settled informally.

A more extreme viewpoint by PO Salem is that he feels, *Like a robot, you are restricted when you talk to others.*

A more typical viewpoint is that of PO Salem, who sees the BWC protecting him from disciplinary actions resulting from false accusations, he says: *the camera is my lawyer.*

While agreeing, PO Naser suggests:

The police are a power, so this camera controls this power more because you will be questioned at the end. The BWC improves the police officer's interaction with others.

Overall, however, PO Naser finds the BWC, *reassuring*. Similarly, PO Obaid

When we interact with the public, whether he is a suspect or other, we have to deal with them equally until he is charged so the camera forces the police officer to follow the correct procedure when we interact with them.

He seems to suggest that pre-BWCs discrimination based on social status was more prevalent, however, is impressed that it protects him from false accusations.

PO Salem has 15-years police service and has used BWCs intermittently over six-months, *Before, there was no security for us*, he says, meaning protection from citizens and the hierarchy.

Several POs suggest the BWC protects all parties: POs, citizens and Senior Officers. PO Naser says, *This camera protects all parties.* PO Ahmad who has ten-years experience in the Police and has used the BWC intermittently for four-years says, *I think that with using BWC, the work has become better.* His example is interesting, a PO colleague insulted a citizen, and the PO denied the offence only for the BWC to uphold the citizen's complaint, an outcome of which he approves. As PO Ali-Sh says:

before, there was the same law that could discipline us if we did wrong, but now, also we have a camera.

Alshabiya Police Station Theme-3: Power and hierarchy - Interview data key points	
I/APSKP/5	A minority of POs reject the BWC feeling it reduces autonomy either by enforcing strict compliance with the law or by giving Seniors the ability to monitor their activities.
I/APSKP/6	Most POs view the BWC as protecting them from discipline resulting from false accusations by citizens.
I/APSKP/7	Some POs see the BWC as protecting everybody by giving objective evidence.

Figure-5.17: Power and hierarchy and BWC - Alshabiya Police Station interviews

APS Theme-4: Policing processes

Some POs use BWC footage to help with reports; this seems to be exceptional, though not prohibited. When Mohamed says, *Only the superiors have the authority to access and watch the videos*, he is clearly wrong, though access requires permission from Senior Managers. Three sub-themes emerge. The first is that for Patrol POs the wider judicial system and senior management of the force seem removed. They see their job as patrol, evidence and arrest.

Training on BWCs or its absence is a major theme for POs. Some such as POs Saeed, Khalid and Tariq say they had no training whatsoever. Perhaps ironically, PO Ahmad says he received a text message instruction. POs Naser and Mohamed had a *small presentation*, and PO Saleh a *brief explanation*. Numerous POs call for better training in using BWCs to gather evidence. PO Ali-Sh says, *There should be more introductory training and workshops* and PO Nawaf: *I have been trained only on how to switch the BWC on and off*, calling for detailed training, including case studies. POs Omar and Obaid say bluntly that *proper training would improve usefulness*. It is clear that POs believe the absence of effective training in the use of BWCs limits the ability of POs to use them in gathering evidence.

A third sub-theme is autonomy on patrol: Seniors viewing footage then being able to direct PO activities outside the Police Station. PO Saeed says that at some incidents, a high-rise fire, he was switching the BWC off, since it recorded no useful data, however, he received a verbal warning from his superior instructing him to operate the camera at all time. He says that Seniors examine BWC footage regularly and frequently give him

advice relating to his conduct, saying, *I felt that all the management were monitoring everything as if they were with is 'in the field.'* PO Naser points out that when Seniors attend incidents, *Sometimes the high-ranking personnel in the police force change when they are facing the camera in an incident:* an interesting suggestion that in the field, Senior's behaviour too changes. PO Ahmed tells of a colleague who acted wrongly being contacted after submitting his BWC data and report: *they reprimanded him instead of advising him.* Whatever action may have been appropriate PO Ahmed's story reflects a typical view that BWC viewing reduces the autonomy of patrol POs.

Alshabiya Police Station Theme-4: Policing processes - Interview data key points	
I/APSKP/8	Some POs resent using BWCs completely.
I/APSKP/9	Other POs cite lack of training as limiting the effectiveness of BWCs to gather evidence and call for systematic training.
I/APSKP/10	POs generally seem concerned that BWCs reduce their autonomy when patrolling since Seniors monitor and direct their activities using BWC data.

Figure-5.18: Police processes and BWC - Alshabiya Police Station interviews

Training and autonomy are the main concerns of BWCs for police processes, linking in the latter case to the previous section on power and hierarchy. None of the POs raised the issue of real-time BWC transmission and more immediate direction by remote Senior Officers, already in operation in some forces. The POs seem removed from the wider judicial system and police organisation viewing themselves are patrol POs.

APS Theme-5: Emotions: learning/attachment/touch-points

POs tended to confine their learning comments to practical matters. PO Khalid says, *Fixing securely on the uniform, so that it does not shift when we are moving about. The weight and the design – it shakes most of the time.* PO Ahmed comments, *unfortunately because of the police car's flashing lights, the video was not that clear.* Other comments relating to training are given above and comments on feelings towards BWCs in an Islamic culture are reported below.

Few POs referred to their emotional commitments – which may be expected given the private orientation in Arab culture. PO Saleh suggests, *we feel comfortable* and PO Naser that he *feels more assured* entering homes. Most of these POs are captured daily on video by their colleagues; footage often viewed by their superiors, yet there is hardly

any comment on how their self-image is portrayed to others. PO Saeed is aware that he appears in his colleague's recording, making him careful what he says and does. Once he and his partner PO viewed a recording hoping to learn how to improve recording. His partner felt that on Saeed's record he (the partner) sounded odd and expressed a desire not to use the BWC.

Alshabiya Police Station Theme-5: Emotions and learning - Interview data key points	
I/APSKP/11	POs make numerous technical suggestions resulting from learning in the practice of using BWCs
I/APSKP/12	There is little comment from POs on how BWCs affect them emotionally either their roles or relationships

Figure-5.19: Emotions and learning and BWC - Alshabiya Police Station interviews

APS Theme-6: Practice shaping interpretation

POs report four areas in which the practice of using BWCs has influenced their interpretation of the technology: technical issues, usability, and its benefits.

Battery failure is often mentioned as a technical problem when operating the BWCs, for example PO Ahmed (*battery goes flat quickly*) and POs Salem and Tariq. PO Saeed attended a serious incident but was unable to record because the camera had run out of battery when at the scene a medic was unnecessarily tampering with evidence, at the same incident a stranger sought to enter the crime scene claiming to be a PO; Saeed could not record anything because of the failed camera. Naser and Mohamed alternatively say the battery has *never failed*, perhaps reflecting different patterns of use.

On attending incidents PO Saeed turns on the BWC, listens for a 'beep' signalling activation and verbally enters data on time/place and type of incident; he says that at times the voice recording is indistinct, but is unaware why.

PO Ali-Sh reports BWCs *can be broken easily if it is dropped. The place that we fasten the camera on now annoys us because it moves*. PO Omar says,

When the camera switches on by mistake, sometimes, it can record personal stuff, which can be used against you (by the seniors). To tell the truth, there are no disciplinary action taken by the seniors with regard to this type of recording. But, at the same time, it causes tension and confusion for some police officers.

PO Saeed reports that he became angry at another PO entering without permission a crime scene for which he was in charge, where unfortunately the BWCs battery had failed. Only when the intruding PO saw how angry PO Saeed was, did he backed off. Had the BWC been operational, PO Saeed believes, it would have prevented his stress.

PO Salem highlights, *the biggest drawback in the camera is the weight and the movement when you walk or run.*

Usability can be enhanced Salem suggests, *Sometimes we remove the camera from our chest to take a better picture/get a clearer image.* Also, interestingly, PO Saleh and Omar overcome the forgetting to switch on issue:

As soon as I receive the report, I switch camera on, enter all the information from base while going to the scene. (PO Saleh)

I see that it is better to switch on from when you receive the incident report in the patrol car rather than wait until you reach the incident. (PO Omar)

Overall, interpretations of the BWC are favourable, PO Saleh has seventeen-year police service using BWCs for six-years intermittently. He previously worried about false accusations: now he says,

.. we feel comfortable and the public is cautious, so it benefits us 100%. But we have some problems such as where we put the camera on a high-vis jacket because it slips down (doesn't stay in place) and we don't know if there is any harmful effects on our health.

For PO Naser, *In the beginning it was a strange thing, but when we understood it and knew how to use it and the benefits of it, we accepted it.*

In summary, as figure-5.20 illustrates, interpretations of the BWC based on practice, while highlighting technical issues are favourable, with POs introducing their own ways around problems such as forgetting to turn on.

Theme-6: Practice shaping interpretations	
I/APSKP/13	Technical problems with BWC include batteries, on/off signal (and others noted in sections above).
I/APSKP/14	PO enhance usability by detaching from body and switching on at incident notification instead of arrival
I/APSKP/15	Overall, interpretations of the BWC are favourable (see also sections above)

Figure-5.20: Practice shaping interpretation of BWC - Alshabiya Police Station interviews

APS Theme-7: Social culture: Islamic/Arab

Arabic privacy-public boundaries draw a strong line at the home and family. PO Saeed says that he switches the BWC off when attending family disputes. PO Ahmad too pays attention to culture in using the BWC.

Family reports with females, there is a difficulty with using the BWC, because of our religious sensitivity, and respect for customs and traditions and sometimes they refuse to be filmed.

PO Ali-Sh concurs,

In a family misunderstanding incident, especially if there is a woman involved, it is difficult to film because it is an invasion of privacy.

PO Salem too agrees,

No, only with family-related incidents and in fatal accidents we do not use it. For example, in Al-Reem Island there was an incident caused by a family misunderstanding, so we moved to the incident and we asked permission to enter the house. The camera was switched on. Then we asked the owner permission to keep it on but he refused so we switched it off.

PO Salem informs citizens, implying their option to discontinue recording.

In the family-related incidents, we do not use the cameras unless the owner of the home allows us to use it. We inform the women that we have a camera. The fighting and assault incidents and serious crime such as murder, fire etc. we film without telling.

It is clear that POs feel the Arab culture problematises recording inside the home.

From an Islamic viewpoint recording of women (for whom one is not Guardian or family) is problematic: respect and guardianship for women is a prominent feature of Islamic culture. PO Saeed cited an incident involving a young unmarried couple, both of whom were naked, which later was verified as prostitution at which he felt recording improper. For PO Tariq *There are some cases when we turn it off, especially in the family problems with women.* For PO Nawaf,

Females should not be photographed if the photography is in a home. This represents a respect to our traditions and customs. You must be aware of the situation facing you. If the photography takes place in the street, women shall be respected, and photography shall only be done for useful purposes. Yes,

in what is related to talking and dealing with the public. In dealing with women, I am bound to customs, traditions and religion. I also have to take care as regards what is recorded.

PO Khalid has 15 years patrol experience and using the BWC for about three-years, speaks of reticence:

The work is the same but, before: there was a reticence when we interact with the public, especially women, like a distance between us and them or we antagonize them. We didn't have anything to protect us before.

PO Khalid had previously been accused of entering a home without permission, he now feels the BWC protects him against such charges. PO Omar reports being told by an angry husband, *Get out you are filming my family!*

POs then are reticent to video women, especially in unbecoming circumstances. PO Naser suggests that,

Legislation is important so that when I use the BWC I will feel more assured. For instance, if somebody asks us to switch off, I respect his opinion and switch off because I don't have any official guidelines to follow

PO Naser suggests POs have discretion on whether or not to always video incidents. It is worth clarifying at this point data from (a) the Police Department leaflet on BWC and Guidance Notes (both in Appendix) since POs receive a confusing message.

If the person objects to being recorded, you can tell him that the police are there to deal with the incident and that his/her opinion has been recorded, that it is in the interest of securing and maintaining the evidence, and that this record protects us against any future allegations and to protect the police and the public. Then continue recording. .. In general, don't stop the recording. Only at the end of the incident should you stop it. (Police Leaflet, BWCs)

The advice here then is clear, always record at incidents. The Police Department also issues a Guidance Note on BWCs containing the following advice.

It may be necessary to stop recording in cases of a sensitive nature, or if the incident has ended before the BWC user reaches it, and in all cases the user should make his professional decision as to whether he will record the entire incident or part of it. ... In the event that the user interrupts or suspends the recording of an ongoing event, he or she shall state the reasons in the recording. Among the examples that are appropriate to stop the recording is the family quarrel in a private home, or if the offender was removed from the scene, and

the BWC user recorded the initial statements of the victim and the recording of the crime scene. (Police Department, Guidance Note, BWCs)

Contradictory advice is usually unhelpful. In this case, POs are given leeway to comply with Islamic tradition in relation to images of women, if they wish.

Figure-5.21 summarises key points from interview data on wider cultures and BWCs.

Alshabiya Police Station	
Theme-7: Wider Islamic/Arab culture - Interview data key points	
I/KP/16	POs in Abu Dhabi are given contradictory advice on using BWC in ‘sensitive’ situations
I/KP/17	POs respect the Arab culture being uncomfortable capturing images inside another person’s home
I/KP/18	POs respect the Islamic culture being uncomfortable capturing images of women

**Figure-5.21: Wider Arab and Islamic culture and BWC
- Alshabiya Police Station interviews**

By way of taking stock, this section has presented interview data from ten POs at Alshabiya Police station, classifying comments using the seven major themes from NVivo coding (section-4.7). Eighteen key findings are highlighted and each related in figures to secondary codes in figures 5.15 to 5.21, which will feature in Chapter-6 reviewing consistency in the data and Chapter-7 analysis between my datasets and previous research. It is clear that exploring BWC from the viewpoint of POs is revealing, in particular issues relating to their P2C behaviour, behaviour and change in occupational cultures (P2P), and hierarchic and power relations. Additionally, use and interpretation of BWCs in an Arab and Islamic context and culture, done for the first time by this research, suggests that previous research is of limited applicability to these contexts.

5.3.2 Khalifa Police Station

Khalifa Police Station Theme-1: P2C behaviour (two-way)

There was a tendency for POs to view the BWC has having a beneficial effect on P2C relations. PO Saif-Kh is a Warrant Officer managing Patrol Cars, who has been in the force for four-years, believed that its helps absorb any public anger, *The public have changed because they know they are being filmed and they respect you and talk to you more politely.* In addition, he notes that photographic evidences reduce and help resolve complaints from the public. PO Majid suggests BWCs are now part of public

humour: *Some of the public say to us “wait while I get ready.” Always, he says, I will be more polite.*

PO Rashid 13-Kh agrees with the politeness point;

When we put the camera as police officers, we are always respectful in our behaviour towards the public. I am not saying that we deal with them aggressively in an arbitrary manner because we are human, and we can make a mistake. Here, the camera makes you interact at the incident with caution and I do my job professionally. Even the other person deals with me with respect.

Saad (Kh) points out that citizens are segmented.

If it is a female, you take permission from her but if it is a man, we switch it on anyway. When you go to an incident involving a non-national, (foreigner) the language might let us down which will cause us some confusion because of the camera recording it. It has a benefit, especially when you interact with women. The purpose of the BWC is to protect us.

Finally, PO Marwan echoes the view of other POs saying,

Wearing cameras is for protection; for example, if somebody complains about me the camera will be a witness of this incident. Sometimes, there are people who try to wind us up, either by blaspheming or swearing at us in a very exaggerated way and when you write the report, only the camera will back us up, especially with drunk cases. Here the camera proves the report, validates what we said - it is a witness for you against the accused or the complainant.

There are some POs who are negative about BWCs, Hamad for examples says, *You feel like that you are being monitored. It limits you.* PO Jasem sees the BWC as a burden.

In general, I don't accept it because it is like a burden on me when I take it from the police station, the way we put it on our body, the public interaction changes especially when they refuse to be filmed. Yes, I don't feel comfortable when I interact at the incident. There is a fear of doing something wrong while I follow the procedure. For example, most of the public do not accept the BWC, either male or female. Why are you filming me? Do you have the right to film me? And I don't have the right answer for them because we didn't get any training about it.

POs Hamad and Majid suggest BWCs can remove flexibility from policing.

The procedure at an incident was simple. We reach the incident without any limitation of the camera. The interaction with the public and other parties was simple. Sometimes we solve the incidents without transferring it to the police station. You can see that the person who reported the incident is afraid at the same time. For example, at a misunderstanding incident: I switch on the camera at the same time there is a misunderstanding between 2 civilians while the camera is recording the incident. I moved in to calm the situation and here we feel nervous because there is something limiting me. It can record some of our actions, even if these actions are normal and nobody will discipline you for it, the feeling inside you is that you might do something wrong – and it affects us psychologically. Sometimes, we intervene to solve the problem and then they ask us ‘why do you intervene? It is not your role, just transfer the case to the police station.

Overall, however, as figure-5.22 records, POs believe BWCs calms C2P behaviour, helps to reduce complaints, more easily reject malicious complaints and reminds POs to behave respectfully towards citizens.

Khalifa Police Station	
Theme-1: P2C behaviour - Interview data key points	
I/KPSKP/22	Some POs believe BWCs help create respectful behaviour between citizens and POs
I/KPSKP/23	Those POs opposing BWCs do so for reasons other than P2C behaviour; focusing on their ‘burden’ or ‘inflexibility.’

Figure-5.22: P2C behaviour and BWC - Khalifa Police Station interviews

Khalifa Police Station Theme-2: Changing occupational culture i.e. P2P

POs view BWCs as reflecting a professionalised police force. PO Marwan has been a PO for seven-years says,

I think using the BWC makes the police work more professional and prestigious when you deal with the cases and it increases the transparency with the public.

Waleed Kh, a Warrant Officer in the Security Branch, for whom the BWC produces a great deal of extra work comments,

Yes, there have been improvements in methods and procedures as BWCs force officers to follow proper procedures. It has been useful for us in educating and training officers, and it has shown us officers’ weak points so that we can instruct them how not to make the same mistakes again.

As Mansoor notes, whatever the police culture in the past, today,

Your behaviour will be civilised when you deal with the public. When you speak you make an effort to speak more clearly because the camera is recording. It is accepted – but most of the police officers do not like it.

His comment about most POs not liking the BWC seems apposite, at least until attitudes catch up with behaviour. As Waleed Kh says, the most important dimension of BWCs is not judicial procedures; instead it is police behaviour and internal opportunities to improve.

It will be used as a reference, for example, if there is a complaint against a policeman. In fact, the BWC videos are useful for more than just case reports as the cameras record the statistics of the police work. Thus, it reveals who has worked efficiently and who has not. The footage can also be used as evidence in work procedures to verify a complaint in a case, etc. The evidence is not required by the court to determine if it can be used as evidence or not. However, if there is a complicated case, for example, a drug case, and the recording is required by Drugs Department, the request will be submitted to the Investigations Department, and they require a registration number from our department.

POs such as Saad Kh are concerned that recording colleagues may lead to getting them into trouble,

Two persons with mental health problems attacked some people in a parked car. The responsible parties moved to the scene. Here if you switch on the camera, my colleague might have a disciplinary issue because the camera will record some of their unprofessional chatting not related to the work and can affect them. Here the camera makes them do their job only.

Other POs seem more comfortable with less technological anxiety, they joined the police in 2009 working with a BWC for one-year policing and says that previously,

... most of the reports were solved amicably at the scene of the incident. Now, every word is recorded and documented, and we can be held accountable for every word and action, for example, a police officer takes action then his senior asks him to come and explain his action, because of the camera. ... the camera forces you take the case to the police station and you can't solve it yourself. ... It is a waste of time.

PO Saad (Kh) has been on patrols for nine years, using a BWC for the last year. He is conscious about wearing the BWC, which makes him act formally.

When you use the camera, your speech is more cautious and without the camera I can explain everything with ease. For example, if I have been at a scene and interact with many people without the BWC, I talk to them in my own way, to

calm the situation and solve the problem. When I use the camera, my speech is restricted only to what is necessary and relevant to the scene and my speech is confined to the work only. Because I have to consider what I say before I speak, and I if I say something wrong, it can cause me to have a disciplinary issue from the management.

Some personalities yearn for a less formal or previous ‘golden age’ occupational culture in policing, however, POs viewing themselves as professionals who continually learn, and change view the BWC as an instrument helping to drive continuous improvement in behaviour towards other POs and the public.

Khalifa Police Station	
Theme-2: Changing occupational culture (P2P) - Key points	
I/KPSKP/24	POs bond in training and Stations and want to avoid causing each other trouble making some way of BWCs
I/KPSKP/25	POs viewing BWCs as an opportunity to professionalise and improve welcome the BWC as part of a new culture.
I/KPSKP/26	POs treasuring autonomy or technophobic or simply content with the occupational culture are wary of BWCs

Figure-5.23: Changing Occupational Culture and BWC - Khalifa Police Station interviews

Khalifa Police Station Theme-3: Power and hierarchy

PO’s reactions to how BWCs impact upon power and the hierarchy are not simply issues of autonomy, rather four sub-themes emerge: autonomy, discipline, continuous improvement and coordination.

Waleed Kh implies that POs seeking to protect autonomy use other arguments: *The majority do not like using the cameras, but their reasons are unsatisfactory, such as the public objecting to being recorded.* Mansoor believes that,

The perception of the BWC in the police force is that it is used for surveillance, although not all of us think that. There is no clear, understandable policies for us to follow, so there is confusion about using the camera.

Patrol POs such as Saif-Kh thinks it alters his job: *I don’t accept it. It annoys us. If we film by mistake it confuses us and makes us nervous in our job.* Marwan states the

autonomy argument: *I accept the use of the camera but there are some of my colleagues who don't because it takes away their freedom.*

Instead of autonomy, some POs fear disciplinary action against them resulting from BWCs, Saad (Kh) makes the case that,

Yes, sometimes the battery goes flat, for example a labour incident, I was shocked to discover that the camera was not working and the existence of it was important in this case. About me, I don't switch on the camera in all cases, because I fear from disciplinary issues.

Saad's clear breach of procedures does indeed leave him open to disciplinary action: a self-fulfilling prophecy. Hamad too fears discipline, if he misbehaves,

They will switch on the videos they will listen to the conversation. If somebody misbehaves, they will ask him to come to the police station and if I misbehave, they will question me.

Rashid-14-Kh, a PO for seven-years says, presents a more nuanced fear of discipline:

One of the situations that I have been to and questioned about: I was going to a fight between a married couple. The husband was in the yard and the wife was outside and she was crying. The husband said to me "Come inside" so I entered the home and I was expecting that the house belonged to him. Here someone else came out from the house shouting angrily that this does not belong to him, it is for the inheritance. Here I went out and I was nervous. After a few days, the seniors asked for me and blamed me for entering the house before checking who the house belonged to. I said to him that I expected that he was the homeowner and that nothing suggested otherwise, and everything was filmed by the camera (in the middle of the situation I hesitated, and I closed the camera obviously because I was afraid of being questioned.)

It is not clear in the Rashid-14-Kh case that he was disciplined or counselled; the other cases admit to breach of protocols. Jasem says, *It limits my actions and it gives me a feeling that someone will discipline me.*

Other POs make a case for altering hierarchic relations. Waleed Kh says, *I browse the recorded videos every day, and I also browse the shots not concerned in the reports. I view the reports and sort them to know which ones are important.* He is looking for opportunities to better guide POs. Marwan makes a similar point supporting BWCs as an instrument in continuous improvement: *The camera will benefit the management when they see what is happening in the job. On the other hand, they will see how well*

the patrolling police react to the public in terms of following procedures, dealing with the public and their methods.

Other POs emphasise the benefits for coordination between sections resulting from BWC material. Rashid-14-Kh filmed graffiti to bring it to the notice of Seniors who he hoped would refer it to the appropriate authorities. Majid says,

They (Seniors) will not waste a full BWC programme for nothing. It can help you to manage the co-ordination between the different authorities if the BWC shows us the limitation between the different parties or so. Briefly it is for co-ordination rather than for disciplining or questioning. I reiterate what I said earlier; I film only the important stuff not just anything, like fines, we only sometimes film the fines to document it.

In summary, focusing only on autonomy misses important points in power redistribution arising from BWCs, which also impact on discipline, continuous improvement and coordination.

Theme-3: Power and Hierarchy	
I/KPSKP/27	BWCs reduce the autonomy of patrol POs where improvement in compliance with standards is possible
I/KPSKP/28	BWCs do present hierarchy with evidence where disciplinary action is necessary
I/KPSKP/29	A major driver of management use of BWCs is improving practice and better coordination between sections.

Figure-5.24: Power and hierarchy and BWC - Khalifa Police Station interviews

Khalifa Police Station Theme-4: Policing processes

One aspect of police occupational culture seems to be a divide, not the P2C ‘them and us’, rather the cocooning of practice POs in relation to Seniors and the judicial system. Patrol POs seem happy to be left alone to their task. Of course, this is not possible, especially where new technology effect training needs, the preparation of reports and back-office processes.

Like Alshabiya Station, the Khalifa Station POs say they have received little or no training in using BWCs: POs Jasem, Hamed, Majid, Mansoor, Mansoor, Marwan and Saad all say so directly. Saif-Kh a Patrol Car Warrant Officer says he had, *Some classes from the department responsible for the cameras.* For Waleed, a Warrant Officer, in the Security Branch BWCs are themselves a conduit to training.

I get to see the procedures taken by individuals, and this indicates to me the individuals who take procedures properly and those who do not. This alerts us to the type of training we need for each policeman to develop himself in his job. ... There is no official training on cameras. Of course, the BWC was implemented one year ago, and it was stopped two months after use, and then it was applied again. At first, we were given some basic tips, such as certain procedures on how to use the cameras. The second phase was that we did not take any training also, but there was no official training, only workshops with the camera experts and a simplified explanation on how to use the cameras. We did not receive any additional information for the cameras except for follow up by the Investigations Department on the developments of camera usage, as there is a reprimand if a policeman refuses to take or use the camera.

It is clear there has been no systematic training of patrol POs on how to use BWCs, however, as Waleed's comments reveal, footage is used to guide training or counselling on POs practice training needs.

Internal police processes are benefiting from the availability of BWC footage to POs in report writing. Accuracy as Rashid-13-Kh notes, give *The credibility of the report that we write about this incident was not 100 % reliable because there was no evidence and it was my word against his.* PO Majid is simply wrong (given the testimony of others and official procedures) to claim that he can alter BWC footage after (or before) it is submitted. PO Waleed-Kh who joined the police eleven years ago, points out that for supervisory grades

.. the number of cases and their statistics were enormous, but after using the BWCs, the real job of the police has become obvious. Real reports have increased by using the cameras. Previously, there were no reports to communicate as the reports were settled at the report site without being recorded in the minutes.

It seems that for internal processes, while BWCs generate a great deal of data, they also result in more accurate incident reports (saving time and potential injustices) and provide management with knowledge of what practice training of POs is needed, as figure 5.25 shows

Theme-4: Policing processes	
I/KPSKP/30	Practice training needs
I/KPSKP/31	More accurate reports

Figure-5.25: Policing processes and BWC - Khalifa Police Station interviews

Khalifa Police Station Theme-5: Emotions: learning/attachment/touch-points

POs at Khalifa Station focus on technical issues rather than learning about emotions from their practice with BWCs; this does not reduce the importance of emotions.

Various technical points in relation to BWCs have been learned from practice. PO Jasem believes the BWCs are too big and record from uncontrolled angles as they bounce against the police vests. PO Majid says,

I think if there is another type of BWC it might be better because sometimes we hear the sound but the camera is facing the ground because it hangs down off my uniform.

For Rashid 13-Kh

Because of the movement it is not really stable on the body and the sound is not clear when you listen to the recording (the sound is affected by rubbing on the uniform) because I watched a small part and I noticed this.

His colleague, Rashid 14-Kh relates that,

Once, I have been to an incident about a drunk woman, semi-naked. Here I switched on the camera and I tried to cover her, but she swore at me and assaulted me (the situation lasted almost one hour) I wrote a report and followed the necessary procedure. Before the use of the BWC, we have been through many assaults and verbal abuse from the public.

Most POs accept the BWC functions reliably; POs Jasem, Hamad and Majid and Marwan are examples. Hamad points out that having no flash means blurred pictures in dark areas, and POs Hamad and Majid think there may be intermittent faults (explaining the intermittent use of the BWC). Rashid-13-Kh has an alternative explanation:

They prevented me from using the BWC for about 2 months because of a camera malfunction that they thought I had caused. Afterwards, the situation was clarified that it was not because of me.

Majid introduces a novel learning point:

Sometimes there is a fire incident so there should be a safe place for the camera. For example, a suspicious car, we can't ignore the incident – we have to ask all the necessary parties, like the bomb squad, the fire brigade, ambulance etc.

Here the filming has to be done at a distance and I think this film will not be clear especially if it is at night.

There is no comment from POs on how BWCs affect them emotionally either in their roles or relationships, this is not to say it is not important, simply a cultural preference.

Khalifa Police Station Theme-5: Emotions and learning - Interview data key points	
I/KPSKP/32	POs have learned a variety of technical ways in which BWC usability can improve to which management should respond.
I/KPSKP/33	While no PO comments on how the technology affects them emotionally, this does not mean it does not.

Figure-5.26: Emotions and learning and BWC - Khalifa Police Station interviews

Khalifa Police Station Theme-6: Practice shaping interpretation

Sections above highlight some of the interpretations made by Khalifa POs in terms of monitoring, autonomy, discipline, and respect to and from citizens and suggestions to technically improve the BWC. Overall, the evidence shows that most POs, some reluctantly, acknowledge that benefits greatly outweighs any problems. Some demur, for example Majid continues to emphasise the limited value of BWCs:

For example, sometimes the operation centre does not give you the authorisation for the use of force but the time is against you. There was one time where one of the public, who was an elderly man, a taxi driver helped us. The story was there was a car, being driven, with the bare wheels only with no tyres. 3 persons in the car and we are 2. When they stopped, 2 of them surrendered and the third ran away. A taxi driver who helped us. Here my colleague ran after number 3 and used his truncheon and the spray. Here in this situation, a local guy came to us and he was judging us why we used force. Here, the prosecutor asked for us and for your information we had not recorded the incident. Even if we had filmed it would not benefit us a lot because there was shouting and running and fighting. I don't think it would film clearly.

Interesting the same PO then went on to remark,

We have a gun; we have a truncheon, spray etc. a lot of things to think about, so taking a flash with us to film is too much!

Majid's own usage pattern illustrates his interpretation of BWCs:

At the end of the day, I use it like a Snapchat or Instagram. Sometimes, I take a photo not a video by switching on and off quickly. Also, we don't only film a crime incident, we also use it to film a traffic incident, e.g. a fine that they might complain against, here the BWC is the evidence.

Almost all POs interpret BWCs as valuable; some for the limited reason of avoiding public complaints or discipline, others more deeply looking to continuous improvement of practice.

Theme-6: Practice shaping interpretation	
I/KPSKP/34	POs tend to accept the BWCs while mentioning technical improvements.
I/KPSKP/35	Overall, interpretations of the BWC are favourable (see also sections above)

Figure-5.27: Practice shaping interpretation and BWC - Khalifa Police Station interviews

Khalifa Police Station Theme-7: Social culture: Islamic/Arabic

POs at Khalifa appear unconcerned about policing in an Islamic context. POs are clearly reluctant to film family disputes; as Jasem says, *There is no hesitation and the petty family reports we try to avoid filming them.* PO Saif-Kh who is a Warrant Officer managing Patrol Cars, comments:

As for myself, I don't film the family incidents. It happens to me once in a family incident, a reaction that made me wary of filming the scene. After that one, we received an order from the management that when we go to a family incident, we should take permission from them and film the scene but if they refuse, we switch off the camera. The incident I am referring to was about a woman who gave her permission to film the scene but when her ex-husband came, he said "why are you filming in the house – there are private things and so on" (By the way, the woman was the home owner).

Such comments are echoed by other POs. Marwan says that in some home situations he might ask for permission, however, he complies with the home-owner's wishes. Waleed Kh adds the proviso that:

In public places, we are allowed to use the cameras whenever we want. In homes, however, permission must be given from the home-owner. In security premises, we are not allowed to record or to take photos. Although if I have permission from a public prosecutor, the cameras are completely allowed. Last week, for example, an incident took place about a report of a murder threat; since I had the public prosecutor's permission, I took the procedures while the camera was on.

The POs view filming of women as problematic. As Mansoor says, *Mostly they refuse, especially the women... for example, there is a report in someone's house and they ask about the camera, then they refuse to be filmed.* This scenario is reported by other POs, when as Rashid-14-Kh says, *if they refuse, we switch off the camera.* His colleague Rashid 13-Kh relates an interesting story:

The incident that I told you about related to the naked woman. There were 2 female police officers with me and they could not move the woman to the patrol car because she resisted them. Here I closed the camera and moved her by myself and I switched the camera off because I did not want to be questioned about my procedure. If you stop a woman and she complains against you, the BWC will protect you if you have filmed it.

There appears to be no public acceptance of filming women, especially in the home and POs simply accept this.

Khalifa Police Station	
Theme-7: Wider culture and context - Interview data key points	
I/KPSKP/36	UAE culture frowns upon filming women, POs operate within these boundaries, especially in the home. Families too are only filmed with the house-holders permission.

Figure-5.28: Islamic/Arab culture and context and BWC - Khalifa Police Station interviews

This section has presented interview material from eight POs at Khalifa Police Station relating their interpretations of BWCs from a PO viewpoint, structured by the seven primary themes (section 4.7) identified from coding. Key findings are highlighted in tables listing eighteen, which will feature during in-case analysis of data consistency in Chapter-6 and full analysis against previous research in Chapter-7.

5.3.3 CID

Salaman is a Warrant Officer in the CID who joined the police six-years ago and specialises in IT. He notes that the MX-200 BWC in use has night vision, with each station having twenty devices. Salman confesses the fear that the public will use BWC data against the police, especially if turned on by mistake and non-protocol language and actions discussed. Salaman confirms complete server security including from suppliers. He accepts some opposition to the BWC:

Yes, especially the older police officers and a lot of them say that it is for monitoring them, but eventually we convince them of its benefits and the reason they use it.

5.3.4 Prison Officers (Community Security, Follow-up and Aftercare)

Three POs were interviewed: (1) Khalaf-W who is a Warrant Officer with thirteen-years police experience; (2) Kahlil is a PO with eight-years' experience and (3) Jarmal has worked for eight years in the Police. All are positive about the benefits of BWCs

in prison where fewer restrictions apply since prisoners are unable to object, though some dangers (of assault) are greater. Khalaf-W points out that unlike CCTV already in prisons, BWCs offer sound and visual records.

Khalaf-W believes the BWC *deters the inmates if they want to behave badly*. He goes on:

I consider it an advantage and the most important advantage is the protection of the police officers. At the same time, if the police officer gets out of line, the camera records that and it protects the inmates too.

Kahlil feels uncomfortable chatting on long prisoner escorts since Seniors review footage. He suggests that *the camera gave us a sense of security because it stores all our dealings with the inmates*. Pointing out that the BWC also offers protection to inmates, Jarmal says as a PO,

the way I deal with the inmates is affected largely because I follow the lawful procedure with more concentration, and there is no negligence in my work (slacking) as our dealings are absolutely and only lawful. ... Before the cameras there was some sloppiness in our work and now we enforce the procedure like a sword edge.

Jarmal, who attended a one-week training course on BWCs, says he learned to switch them on, how to attach and use them. He says that points observed by Senior Officers from footage are raised in Annual Assessments of POs. Finally, Kahlil notes that women POs use BWCs in the women's section of the prison

... but it has its own privacy and security procedures, from the Women section. The recording never goes outside that section of the prison and they deal with it cautiously. Of course, in the women's section, the problems and fighting is less than in the Men's section.

In summary, Prison POs find BWCs positively contribute towards their safety and welfare. They avoid many of the contentious issues outside being single-gender and having a population without the choice not to be filmed.

5.3.5 Social Support Centre Team

The SSC is akin to a rapid intervention SWAT team. Six POs were interviewed: (1) Fahad a PO since 2000; (2) Sami PO with 10 years' service; (3) Ayman a PO with

three years' service; and (5 and 6) Fatima and Aisha are two of the few women POs interviewed; the former has been a PO for fourteen years and the latter four-years. Since the women PO case differs in some interesting respects, this is reported separately, below.

SSC use a Taser camera. All six POs describe its use as making a dramatic and positive difference to their work since as Sami describes, all events and decisions are recorded relieving him of procedural worries; *the accused cannot change his words*. Fahad points out that in a team of four, even if one BWC defaults, others continue. The public he says know that BWCs are worn, making them more careful and polite. SSC incidents can be dramatic and serious; the BWC is active during entire incidents, though permission is needed if women are involved. Nader offers an example:

Example: there was a car stopped in a remote site, we got out of the patrol car and there was a woman who had (appeared to have) fainted in that car. The camera was turned on. This recording helped us later on as this woman lied and unfairly accused us.

Previously, Sami says, there was no camera, so we might have neglected some procedures. We are humans and may make mistakes. One mistake Ayman admits:

The mistake was made by me not by the camera when I turned it on, but it did not work and later on I realised that and turned it on again.

Nader is responsible for downloading and classifying footage, which are then used for training purposes learning from both mistakes and successes. He says, *If these procedures are good, I classify them as positive. Of course, we concentrate on the negatives for developing work.* He points to one problem:

During the first thirty seconds of the camera activating there is no sound and this is considered a negative point as we may be faced with many things during these thirty seconds.

All SSC POs are conscious of the position of women in Saudi society. Nader comments,

In some reports, I think that the camera should not be turned on. Sometimes, the family, including women, may be photographed. This is an invasion of privacy that we try to avoid.

In summary, for SSC the BWC is an important innovation, recording fast-moving actions and decisions in what might be serious incidents, ensuring that provided procedures are complied with, the PO's integrity is intact.

Fatima and Aisha are two of the few women POs interviewed, their viewpoints are recorded at length. Fatima believes that Islamic traditions are supremely influential, *like entering a house with a woman who is not wearing hijab and so on*. Aisha frames some filming as a necessary evil.

Yes, I feel that there is some invasion of privacy. For example, if you have been to an incident in a house with a woman, not wearing 'hijab' but the filming is compulsory; it is an invasion! In the hospital, when you deal with women, the filming is necessary in our job – it is a necessary 'evil'

Fatima goes into some detail of their work.

In some incidents, especially with women, we respect their privacy, so we don't film the things that we consider not relevant to the case, like if she is naked or similar. For example, once when I reached an incident, regarding a woman who was wanted by the police and when I was filming the scene, I noticed that the camera was running, and, as the woman was naked, I covered the camera with my hand, so as not to film her body and keep the sound recording running. Of course, if I felt that the recording is important in some cases I would film the scene and would not cover the camera lens. Of course, the management gave us the trust to use our discretion and make a decision at the scene.

Aisha gives another example.

.. in an incident where a person is in hospital, if there was a woman involved, we don't film them – even if I filmed, nothing would be used against me in this situation, I do it only out of respect for a woman's privacy. However, this concept should not harm me or harm the accused and should not obstruct our job as police officers so in that case I would film the scene regardless.

Fatima comments on complaints.

I have been to an incident between a couple. When I reached the incident, the woman was naked, so I asked for a blanket to cover her, but she refused hysterically, and the camera was on and the husband was blaming us all the time. Then we moved her by ambulance to the hospital, also the husband complaining about us recording. So, I said to him "Go to the court and

complain against me if you want!” Afterwards, he apologised and admitted his mistake.

Finally, Aisha comments on the same issue.

The management called me once because there was a complaint against me, about my bad interaction with the person who reported the incident. I felt a bit nervous – I was certain that my procedure was right and with the camera, I felt safe somehow.

In summary, the two women members of the SSC team are specifically involved in incidents involving women. Their testimony reveals an acute sensitivity towards balancing the needs of policing with those of guardianship for women and how the BWC helpfully records events, dialogue and decisions providing an evidential base for their conduct.

5.3.6 Strategy development

Jim is a Detective Police Inspector from London’s Metropolitan Police, now working as a Strategic Advisor to Abu Dhabi Police. His initial concerns were culture (objection to being photographed), evidential status in court and software (which is all in the English language). He hopes that BWCs will assist improving human rights reportage and enhance professionalism.

5.3.7 Public prosecutor

Jaber is a Public Prosecutor in UAE. He began with a background summary that respect for privacy is a basic right mentioned in the Qu’ran (*And do not spy or backbite each other*) and enshrined in the UN Charter, various international treaties and the UAE Constitution and legislation. In particular Jaber argues, information technology adds difficulties to interpreting these rights and laws. In particular, BWCs must conform to strict conditions setting out their scope, controls and conditions of use, as an exception to a constitutional and legal basis that cannot be violated by administrative decisions. Otherwise, the procedure is null and void. He concludes with,

I believe that the use of BWC cameras by the police as a means of documenting crimes will not be practical, since the evidence obtained will always be contested before the courts and in all cases subject to the discretion of the judiciary.

BWCs then alone are insufficient evidence of a crime for which witness testimony and other evidence is necessary and where presented BWC evidence must comply with strict codes of conduct.

5.3.8 Senior Officers

This section brings together the interpretations of how BWCs affect police practice by eight Senior Officers of the Stations and sections discussed above. The Senior's viewpoint on the seven major themes is particularly apposite because they respond to and guide the emerging practice of junior POs. Figure-5.28 details the sample.

Theme-1: Police to citizen (P2C) behaviour

UAE's Vision for policing says, *Our purpose is to bring about a safer society, to maintain stability, to reduce crime and contribute to the delivery of justice in a way, which secures and maintains public confidence.* Senior level POs are directly accountable for delivering this vision.

Pseudonym	Rank	Role	Location	Experience
Saquer	Major	Head of the Security Patrols Branch	Al-Shabiya Police Station	15 years
Arif	First Lieutenant	Police Patrols Officer	Al-Shabiya Police Station	17 years
Sultan	Lieutenant Colonel	Head of Field Recording at the CID	General Directorate	22 years
Yousif	Lieutenant Colonel	Head of the Infrastructure Department	Information and Communication Technology Centre	26 years
Ibrahim	Captain	Manager of the Patrol Section	Khalifa Police Station, Operation Section	25 years.
Hamid	Captain	Shift Supervising Officer	Community Security Section, Prisons	21 years
Yasser	First Lieutenant	Manager of the Field Photography Centre	Social Support Centres Department (SWAT), Visualisation Field Branch	7 years
Jamal	Captain	Manager of the Patrol Car Section	Social Support Centre, Operations Section	15 years

Figure-5.29: Senior Officer interviewee details

Sager, as Head of the Security Patrols, says that *We suppose that any one of the public or policemen are honest, but this is not 100% the case* and goes on to suggest the BWC enhances accountability of POs when autonomously working outside Stations. Sager

calls attention to BWCs covering areas *not covered by CCTV*, an important point in a country where CCTV is ubiquitous but does not have full coverage (or sound). On the same theme of integrity and rooting out corruption, Jamal at SSC (SWAT) comments,

There are a lot of problems that happen to us in the police force, like blackmailing, bribery, threats, provocation and even assault sometimes and this is an intrinsic part of our job and that is why this camera protects us and acts as a deterrent to the public when they interact with us.

From a Senior Officer viewpoint, BWCs form part of the campaign to eradicate corruption. They recognise as junior POs do that BWCs can help improve P2C and C2P behaviour. Sager comments that while some citizens were wary of BWC, now they view it as a mutual benefit. In prisons, Hamid suggests BWCs, *makes the prisoner think before he acts*. Where disputes do arise, Sultan in Field Recording notes that the BWC is a record and a switched off BWC implies negligence, even where the PO acted according to standard operating procedures (SOPS). Individual POs, Jamal at SSC suggest like himself find, *the camera controls me and makes me follow the straight path and it teaches me that the BWC will protect my rights from whoever insults me.*

Senior Police Officers	
Theme-1: P2C Behaviour - Interview data key points	
S/ KP/37	Seniors view BWCs as helping root out corruption
S/ KP/38	Seniors believe that BWCs improve P2C and C2P behaviour

Figure-5.30: P2C behaviour and BWC – Senior Officer interviews

Theme-2: Changing occupational culture: police to police (P2P) behaviour

Sager, as Head of Security clearly supports *security by surveillance*, suggesting the BWC enhances accountability of POs when autonomously working outside Stations; he calls attention to BWCs covering areas *not covered by CCTV*, an important point in a country where CCTV is ubiquitous but does not have full coverage (or sound). From a similar perspective that accountability is of growing importance in the occupational culture, Arif, a Patrols Manager, suggests BWC positives far outweigh negatives,

Individuals feel they are restricted as the BWC records by audio and video and sometimes they forgot it in the patrol car when in it is switched on, which creates some kind of fear. So, some individuals don't like to use it. The place on which it is worn is also not suitable because it gets in the way for the officer in case of a chase, etc.

As Manager of the Field Photography in SSC (SWAT), Yasser says,

... there is some reluctance to use the BWC among the police officers SWAT), but we overcome this reluctance by explain to them why this technology exists and that it is for their protection. Also, the benefits of making them work more professionally.

P2P accountabilities in SSC, a volatile team-decision environment is enhanced Yasser believes *by wearing the camera securely on the bullet-proof vest and the wide-angle lens is even better than in the older model of camera.*

Overall, Seniors believe that BWCs help move accountability into centre-stage consciousness in the occupational culture with POs knowing their actions and decisions are recorded.

Senior Police Officers	
Theme-2: P2P Occupational Culture - Interview data key points	
S/ KP/39	Seniors believe BWCs strengthen upwards and horizontal accountabilities in the occupational culture

Figure-5.31: P2P Occupational culture and BWC – Senior Officer interviews

Theme-3: Power and hierarchy

Although an Officer, Hamid works in the relatively closed prison environment. His views on power redistribution arising from BWCs appear closer to some junior POs when he says; *we felt we were being watched because we are using them [BWCs].* All of the other Senior Officers take a different perspective. Sultan at CID Field Recording emphasises how the BWC protects POs:

The BWC may cause concern or stress to policemen as they feel they are under supervision. In application of this programme, we face the difficulty that the police staff make excuses such as the camera is defective, doesn't respond or forgotten ..etc. The challenge is how to create the idea or to change the nature of the existing idea that BWC is not controlling you, it is provided to protect you and if you make a mistake you shall not be penalised but trained on how to improve the BWC operation.

Managing Patrols, Arif firmly views BWCs as a driver of continuous improvement: identifying errors to improve, rather than discipline.

we can refer to the BWC in case of mistakes in procedures made by individuals. In addition, we can arrange workshops to review correct procedures and

mistakes. Moreover, the BWC protects policemen, particularly if there are some complaints filed against them by the public and women in particular.

Sultan emphasises the strict control over viewing the footage.

I and other two persons are designated to review recordings on a daily basis. Also, the police station's directors have the same power. I'm the only person who has the authority to delete recordings - in addition to the control and planning officer. If the videos are sensitive, they shall not be viewed by anybody, even the commander is not entitled to the same, unless it has been submitted to him, by us, if required.

Monitoring junior POs by using BWC footage is then strictly controlled. It does reduce Patrol Officer autonomy where standard operating procedures are breached, however, from the Senior Manager perspective, the added control given by BWCs is an opportunity to identify and eradicate deviation from procedures.

Senior Police Officers	
Theme-3: Power and hierarchy - Interview data key points	
S/ KP/40	BWC footage is used by Senior Officers to identify and eradicate deviations from standard procedures

Figure-5.32: P2P Power and hierarchy and BWC – Senior Officer interviews

Theme-4: Policing processes

Senior Officers are much closer to the wider judicial system than junior POs and more likely to be accountability for evidential Police activities or breaches of standard procedures.

Given the highly sensitive nature of data captured by BWCs, the first concern of Senior Officers is data security. Yousif, as Head of Infrastructure has important responsibilities for data security and says,

Firstly, our system and programmes are not connected to the Internet. There are air gaps between two networks, between the Internet and the Intranet and the way it is done is through the Intranet and it is extremely secure. It is a network that belongs to the police force. Nobody can access it, either via the Internet or remotely. The process works like this: the police officer records, then he takes it to his police station and this station is connected to the police force network and the videos are uploaded to the system from there. Of course, we have got a lot of international certification about how secure our network is. Of course, even if you uploaded the videos in the IT department, nobody could watch it at all and also the person who uses the BWC cannot see the video

or modify it or control it. ... The recording is never uploaded using Cloud technology. (He emphasised the word never).

An interesting implication of Yousif's comments is that although BWC could transmit from PO to Station in real-time via an Extranet, for UAE Police this is not a possibility. Yousif goes on to comment,

The only personnel who can see these records are myself, the Manager of my section and the department Manager. The system we use shows us accurately who has had access to the recorded material. At the same time, nobody has the authorisation to delete or modify any of these records. The videos recorded stay in our department and never leave this department. The videos are never deleted at all – ever. Of course, there is a future plan that after one year, the video can be deleted if it is not needed and there is no reason for us to keep it.

Sultan, Head of Field Recording explains further.

Generally, the recordings are kept in the system for two months and then deleted automatically. If there are important videos, they shall be kept by the authorised officer, and the recordings shall be transferred to the main system. Dhabi local police system to prevent penetration/hacking because it is not connected to the Internet. Recording through network would be better financially, but the policy of information security shall not agree to connect its systems with Internet.

Sager hopes that in future more use can be made of BWC footage as Court evidence and for training purposes with Patrol Officers. Arif, who is a Patrols Manager at Al-Shabiya Police Station would like to use footage in training on a regular basis, but emphasising the security point, notes that for viewing footage, *I had the power in the past, but currently I don't have the authority to do so. Previously I had access to reports, could select the important ones and report on the same to the seniors.* Retrieval of footage to resolve disputes seems to work adequately, Sultan as Head of Field Recording gives an example of a woman's complaint about a PO being settled in the PO's favour after the Public Prosecutor requested the data and *upon reviewing the recording, it was found that the policeman's statement contradicted with the complaint and the case was referred to the Public Prosecution and the woman was punished.*

To summarise, Senior Officers are close to the judicial system and aware how difficult it is to access BWC footage, even though they wish to use it for training purposes. Considerable effort is taken to keep the footage secure. Police processes then at a

Senior level favour privacy above access, even for their own purposes. There is currently no big data analysis of the BWC data.

Senior Police Officers	
Theme-4: Policing processes - Interview data key points	
S/ KP/41	Data security is paramount for Senior Officers even when this restricts their ability to improve training.
S/ KP/42	BWC data is sparingly used in training, unlikely to be streamed in real-time and not analysed using machine learning or artificial intelligence techniques.

Figure-5.33: P2P Policing procedures and BWC – Senior Officer interviews

Theme-5: Emotions: learning/attachment/touch-points

For Senior Officers, the UAE *Vision* to deliver *justice in a way which secures and maintains public confidence* is an invitation to continuous improvement by using the latest technologies and detaching POs from old ways-of-working and instituting improved ways-of-working, part of which is P2C and P2P BWC behaviour controlled by BWCs. For Yousif as Head of the Infrastructure Department, BWCs are integral to achieving the UAE Vision.

When they started this project, the aim was training. Afterwards, the users of this system saw the feedback from this camera has additional advantages other than training, and they liked it. Such as providing proof of the reported incidents. The manufacturer modified the system in line with our specific [Abu Dhabi police] needs after the Seniors saw that expanding the use of this camera could have enormous benefits other than simply as a training aid, but with limits and these limitations are controlled by the technology itself. For example, when the manufacturer started to do the sizing, they asked for specific servers and a specific storage capacity. Then they saw that the bandwidth that the data transfer was restricted by the bandwidth and this had limitations for us. But even with these limitations, they still benefit twofold; as evidence and for training purposes. This is in general and from our perspective, as an IT department, we see that uploading the videos internally is better than the previous band width limitations.

At SSC, Jamal says BWC footage is already prominent in PO training,

[For] two months we have been training daily for three hours about how to use it and the lawful procedure for its use and for our own procedure. To know how to make it a positive in our job as a supporting tool to help us in the cases that we go to and also how to deal with the public. Like, our procedure at the scene, psychological scene, drunk & disorderly scenes, fights etc. We benefit from this camera a lot.

The Head of Field Recording, Sultan wants to generalise this use of BWC footage.

It will be used in educating the policemen and for field knowledge. Part of the matter, the BWC usage in legal aspects, has not commenced yet and it shall be coordinated between us and the judiciary authority to use it as an evidence in court cases. To provide training lectures and courses about these recordings and how to use them and review the same at Police colleges and schools. This enables the police graduates to know what is happening on the street before starting fieldwork.

While junior Officers focus on learning how to use the technology, Senior Officers are focused on using the results of the technology for training and continuous improvement purposes.

Senior Officers are also intent on learning from practice how to improve the technology itself. Hamid is the only Senior who is critical of the existing BWCs.

Yes, it needs to be improved, the camera needs to be changed... the quality is very poor. ... No, but the battery runs out quickly and the way we attach it (to our uniform) hinders our work, especially when we interact with the prisoners and going about our usual daily job.

Jamal who enthusiastically support the adoption of BWCs suggests, *The camera needs to be improved: we need to add a GPS to the camera in order to know the co-ordinates of the police officers and the location of the scene and of the police officers, which would simplify our work.*

Other Senior Officers are taking practical steps to improve the BWCs. Yasser as Manager of Field Photography explains why previous use of BWCs has been intermittent

We used Taser first generation cameras before and it was excellent, but then we faced some problems with the camera producer, which was if we wanted to use that camera, it had to be online and connected to their Cloud storage system and we refused this option because of the confidential nature of this material. The two main flaws of the first generation [camera] were that the upload speed was very slow, and secondly, with low light, the image was not clear. But the new cameras are better than the older ones in terms of upload speed, clarity of recording

Yasser goes on to say, *we sit with the manufacturer and ask them about the camera's specifications and the general use of the camera.* Senior Officers then are listening to

lessons from practice and seeking to improve the technology in partnership with the (British) supplier.

Later analysis will discuss how learning and emotional attachment figure in moving from emotional attachment to old ways-of-working in the occupational culture towards new ways-of-working and how this impacts on the occupation culture. Jamal at SSC is one of only a few interviewees to refer to emotions. He says,

For me I have an anger management problem and in the field, this personality affects me when I interact with the public, especially if someone swears at me or insults me, my reaction is to get angry. So, the camera controls me and makes me follow the straight path and it teaches me that the BWC will protect my rights from whoever insults me.

His comments on the behavioural control resulting from the BWC perhaps reflect the views of many other POs who are less inclined to state them.

Senior Police Officers	
Theme-5: Emotions and learning - Interview data key points	
S/ KP/43	Senior Officers intent on achieving UAE's Vision interpret BWCs as a continuous improvement tool using footage extensively in training and re-training
S/ KP/44	Senior Officers listen to feedback from practice and specialist opinions to work with supply partners to improve the BWC technology
S/ KP/45	Few POs articulate their emotional attachments, understanding and changing these are part of the process of using BWCs to adopt new ways-of-working.

Figure-5.34: Emotions and learning and BWC – Senior Officer interviews

Theme-6: Practice shaping interpretation

Justice evenly administered relies upon street-level bureaucrats (in this case Patrol Officers) acting within prescribed operating standards. Doing so involves exercising professional judgement about people and events, judgements that sometimes are ill advised. Senior Officers are intent on removing discriminatory flexibility at the P2C touch-point by better training POs in the making of judgements, since the making of judgements cannot be eradicated from police work. BWCs as noted above offer new opportunities to relay to POs good and poor practice captured from practice. Yet, training for POs on BWCs appears inadequate. Ibrahim, as Patrol Manger at Khalifa Station, received no training on BWCs and Arif, as Patrol Manger in Al-Shabiya Police Station, is aware that Patrol Officers get scant training on BWC. He comments,

I have not received an official training, and this caused a problem in my work. I have a good knowledge of some technology-related matters in police work. We have faced some problems, in the beginning, among police officers regarding the age categories especially those older persons; because they don't have enough information about, or understanding of, technology. For my side, I have given some advice, regarding the use of BWC.

Sultan at Field Recording too is acutely aware of this fearing that improper use of BWC results in evidential problems.

The policeman awareness and understanding of the crime scene and its importance are essential factors as the crime scene preservation represents 70% of crime discovery. If it has not been kept appropriately, the crime records may be lost. We have organized training courses and workshops for some police officers who don't know how to act correctly at a crime scene. In addition, some individuals are lacking when it comes to of good dealing with the public, as our headquarters directs to deal with public politely and make them feel at ease and comfortable; a vital issue for us. Some individuals' behaviour does not conform to our management directives; therefore, some courses should be arranged to guide policemen on how to deal with the public.

Figure-5.35 emphasises that Senior Officers too are reinterpreting BWCs.

Senior Police Officers	
Theme-6: Practice shaping interpretation - Interview data key points	
S/ KP/46	Senior Officers are reinterpreting how BWCs are introduced and the use that is made of them and the data they provide.

Figure-5.35: Practice shaping interpretation and BWC – Senior Officer interviews

Theme-7: Social culture: Islamic/Arab

Like other UAE POs, Senior Officers are aware that policing in an Arab and Islamic culture and context influences policing practice and with that how BWCs are used. Interestingly, Sultan as one of the most senior at Lieutenant Colonel and situated in the General Directorate poses these issues in a wide perspective.

The BWC is designed to protect human rights; the red line that should not be violated. There are so many human rights violations in many countries worldwide, the directives of UAE State and Abu Dhabi Police is a red line and can't be crossed and is included in the strategy for Protection of Human Rights. We note that BWC helps a lot in transparency and protecting the policemen and the public.

He goes on to note the importance of

... the public's privacy, we do not violate it and can't assert the same as the matter is in the hands of the camera user. I can say that we do our utmost best to maintain the privacy of society, particularly for women. For them, if recording is important, the female Police shall be called; we have to respect our norms and customs.

Other Senior Officers too emphasise Guardianship with women guiding BWC usage. Arif's Patrol Officer experience is that,

You can use it in the field without any problems, but some reports in connection related to domestic cases are problematic, because homes have their privacy, particularly if there are females involved. We should get the permission from the householder to enter the house and explain the idea of the camera and its reason. If the householder allows us to record, we switch on the camera. If he refuses, then the photography and videography shall not be done, especially if there is a female present, such as his wife or any other woman. As for fieldwork, picturing is compulsory for all reports. The public have no way to refuse in case of fieldwork.

Sultan notes the importance of POs exercising discretion,

In view of our customs and traditions in UAE, recording is not preferred, for example, in case of (husband and wife situations) and this is left to the user's discretion and evaluation (of the situation)

These points are echoed by other Senior Officers.

Senior Police Officers	
Theme-7 Wider Islamic/Arab culture- Interview data key points	
S/KP/47	Senior Officers interpret the use of BWCs as helping secure human rights and evenly exercised justice within the Islamic and Arab culture and context characterising UAE.

Figure-5.36: Practice shaping interpretation and BWC – Senior Officer interviews

5.4 Summary

In summary, interviews with eight of the most Senior Police Officers in UAE reveal that the Senior perspective is wide and strategic highlighting issues such as eradicating corruption, promoting human rights, embedding horizontal accountability in police occupation culture, using footage from BWCs in support of continuous improvement in policing practice, stringently securing data, listening to lessons from practice and working with suppliers to improve the BWC technology and continually re-interpreting how BWCs are used and their impact on occupational culture.

Having presented the three datasets, the thesis now moves into analysis, beginning in Chapter-6 with analysis of coherence and consistency with the datasets; comparing and

contrasting interpretations of BWC by differences sets of Abu Dhabi police officers. Following this, Chapter-7 then answers the three research questions by triangulating between the data gathered in this research and previous research. In doing so, it references the framework in figure-3.6 and suggests new theorisations BWC interpretation from the police officer perspective and in an Islamic and Arab culture.

Appendix to Chapter-5: Summary of key points from data presentation

Figures-1 to 36, presented separately in Chapter-5 are here amalgamated for making future reference easier.

Observation data – key points	
Theme-1: P2C (two-way) behaviour	
O/KP/1	Much of the POs time is spent attending non-crime incidents.
O/KP/2	POs record interview and evidential materials on the BWCs
O/KP/3	POs forget to inform citizens that the BWC is active (though as the pilot progressed, POs forgot less often.
O/KP/4	In citizen-to-citizen disputes, POs are comfortable the BWC records their efforts to achieve resolution.
O/KP/5	POs believe citizens in dispute situations behave more respectfully towards the Police when they know the PO is recording on a BWC.
O/KP/6	Citizen behaviour towards POs can improve when they become aware that BWCs are recording their behaviour: informing citizens of BWC activation may benefit the PO.
Theme-2: P2P behaviour (occupational culture)	
O/KP/7	POs find the BWC awkward to wear meaning they take it off and may forget to activate it.
O/KP/8	Introducing BWCs requires POs to reassess joint evidence gathering to include when both need to wear the BWC
O/KP/9	POs used to capturing interview evidence may focus too much on BWC visual evidence to the detriment of traditional policing, gathering dialogic evidence.
Theme-3: Power and hierarchy	
O/KP/10	BWCs can record (previously autonomous) Patrol Officer's breach of procedures
O/KP/11	When specialist sections (including Senior Officers) are present and BWCs operational, PO's behaviour becomes more serious and formal.
Theme-4: Policing processes	
O/KP/12	Failure to activate the BWC (perhaps due to its novelty) or turning it off before completing evidence gathering can cause loss of evidence.
O/KP/13	Capturing BWC evidence aids complete reporting and specialist teams later involved in the case
Theme-5: Emotional attachments and touch-points	
O/KP/14	POs may turn off the BWC when undertaking actions, they fear may get them into trouble.
O/KP/15	Some POs worry that the BWC records their actions and may get them into trouble.
Theme-6: Practice shaping interpretation	
O/KP/16	POs switch the BWC on and off during incidents (excused by battery conservation, darkness) perhaps worrying that it records informal discourse
O/KP/17	POs identify design issues: awkward to wear, no signal to citizens of activation and vest uncomfortable.
Theme-7: Practice shaping interpretation	
O/KP/18	POs appear uncomfortable capturing images of women (and their children), especially inside citizens' homes.

Figure-5.37: Amalgamation of figures 5.1 to 5.7 – key points from Observations

Critical Incident data – key points	
Theme-1: P2C behaviour	
CI/KP/1	Quality of evidence from BWCs is not standardised, showing the need for effective PO training
CI/KP/2	Wearing BWC does not inhibit POs from following up new issues arising from call-outs
CI/KP/3	Quality of imagery from the BWC varies, at time the verbal footage is useful evidence.
Theme-2: Occupational culture	
CI/KP/4	BWCs provide new way of backing up colleagues during CIs
CI/KP/5	BWCs capture non-crime reconciliation activities of POs
Theme-3: Power and hierarchy	
CI/KP/6	The procedural point at which cases are referred to Seniors is recorded on BWCs, perhaps reducing Patrol Officer autonomy, certainly highlighting the point of responsibility transfer.
CI/KP/7	Since PO activities are recorded on the BWCs Seniors will prescribe activities more, for example to reduce danger: Seniors will become more prescriptive of Patrol behaviour.
Theme-4: Policing procedures	
CI/KP/8	CIs show importance of both POs activating BWCs to ensure all possible evidence is captured
CI/KP/9	POs not recording incident data (time, place, overview) can limit usefulness of BWC evidence.
CI/KP/10	Rapidly during the pilot, PO learns to use the BWC effectively, though standard of evidence captures depends on individual POs, illustrating the need for training.
Theme-5: Emotions and learning	
CI/KP/11	CIs can be emotionally stressful. At times POs under stress fail to activate the BWC or use it properly; experience and learning from practice is likely to add to PO's learned behaviour.
CI/KP/12	For some POs (CI/12) BWC have an immediate stress-reducing affect or show calmness in difficult situations (CI/14)
Theme-6: Emotions and learning	
CI/KP/13	BWC technology (CI/1) is yet another item for POs at CI to think about: better design of the technology (signalling on/off, signalling 'on' to citizens, recording time/place, head-worn 360-degree image capture) would help Patrol Officers. Also, the BWC technology may be designed to overcome flashing lights from vehicles by automatically adjusting depth of field.
CI/KP/14	During BWC introduction phase POs are identifying important limitations in the technology.
Theme-7: Wider Islamic/Arab culture	
CI/KP/15	Since capturing images of women and inside Mosques is delicate in UAE's culture, POs respond by cautious use of the BWCs.

Figure-5.38: Amalgamation of figures 5.8 to 5.14 – key points from Critical Incidents

Interviews at Alshabiya Police Station - key points	
Theme-1: P2C behaviour	
I/APSKP/1	POs believe Police and public are better behaved when being recorded.
I/APSKP/2	POs believe the BWC offers protection against false accusations.
Theme-2: P2P Occupational culture	
I/APSKP/3	Ambiguous effects of BWC on police culture: making P2C relations easier or formalising relationships
I/APSKP/4	Some PO worry that their image portrayed in recordings by other POs fails to reflect their self-image.
Theme-3: Power and hierarchy	
I/APSKP/5	A minority of POs reject the BWC feeling it reduces autonomy either by enforcing strict compliance with the law or by giving Seniors the ability to monitor their activities.
I/APSKP/6	Most POs view the BWC as protecting them from discipline resulting from false accusations by citizens.
I/APSKP/7	Some POs see the BWC as protecting everybody by giving objective evidence.
Theme-4: Policing processes	
I/APSKP/8	A minority of POs resent using BWCs completely.
I/APSKP/9	A majority of POs cite lack of training as limiting the effectiveness of BWCs to gather evidence and call for systematic training.
I/APSKP/10	POs generally seem concerned that BWCs reduce their autonomy when patrolling since Seniors monitor and direct their activities using BWC data.
Theme-5: Emotions and learning - Interview data key points	
I/APSKP/11	POs make numerous technical suggestions resulting from learning in the practice of using BWCs
I/APSKP/12	There is little comment from POs on how BWCs affect them emotionally either their roles or relationships
Theme-6: Practice shaping interpretations	
I/APSKP/13	Technical problems with BWC include batteries, on/off signal (and others noted in sections above).
I/APSKP/14	PO enhance usability by detaching from body and switching on at incident notification instead of arrival
I/APSKP/15	Overall, interpretations of the BWC are favourable (see also sections above)
Theme-7: Wider Islamic/Arab culture	
I/KP/16	POs in Abu Dhabi are given contradictory advice on using BWC in ‘sensitive’ situations
I/KP/17	POs respect the Arab culture being uncomfortable capturing images inside another person’s home
I/KP/18	POs respect the Islamic culture being uncomfortable capturing images of women

**Figure-5.39: Amalgamation of figures 5.15 to 5.22
– key points from Alshabiya Police Station interviews**

Interviews with Khalifa Police Station Officers – key points	
Theme-1: P2C behaviour	
I/KPSKP/22	The majority of POs believe BWCs help create respectful behaviour between citizens and POs
I/KPSKP/23	The minority of POs opposing BWCs do so for reasons other than P2C behaviour; focusing on their ‘burden’ or ‘inflexibility.’
Theme-2: Changing occupational culture (P2P)	
I/KPSKP/24	POs bond in training and Stations and want to avoid causing each other trouble making some way of BWCs
I/KPSKP/25	POs viewing BWCs as an opportunity to professionalise and improve welcome the BWC as part of a new culture.
I/KPSKP/26	POs treasuring autonomy or technophobic or simply content with the occupational culture are wary of BWCs
Theme-3: Power and Hierarchy	
I/KPSKP/27	BWCs reduce the autonomy of patrol POs where improvement in compliance with standards is possible
I/KPSKP/28	BWCs do present hierarchy with evidence where disciplinary action is necessary
I/KPSKP/29	A major driver of management use of BWCs is improving practice and better coordination between sections.
Theme-4: Policing processes	
I/KPSKP/30	Practice training needs
I/KPSKP/31	More accurate reports
Theme-5: Emotions and learning - Interview data key points	
I/KPSKP/32	POs have learned a variety of technical ways in which BWC usability can improve to which management should respond.
I/KPSKP/33	While no PO comments on how the technology affects them emotionally, this does not mean it does not.
Theme-6: Practice shaping interpretation	
I/KPSKP/34	POs tend to accept the BWCs while mentioning technical improvements.
I/KPSKP/35	Overall, interpretations of the BWC are favourable (see also sections above)
Theme-7: Wider culture and context	
I/KPSKP/36	UAE culture frowns upon filming women, POs operate within these boundaries, especially in the home. Families too are only filmed with the house-holders permission.

**Figure-5.40: Amalgamation of figures 5.22 to 5.29
– key points from Khalifa Police Station interviews**

Interviews with Senior Police Officers – key points	
Theme-1: P2C Behaviour	
S/ KP/37	Seniors view BWCs as helping root out corruption
S/ KP/38	Seniors believe that BWCs improve P2C and C2P behaviour
Theme-2: P2P Occupational Culture	
S/ KP/39	Seniors believe BWCs strengthen upwards and horizontal accountabilities in the occupational culture
Theme-3: Power and hierarchy	
S/ KP/40	BWC footage is used by Senior Officers to identify and eradicate deviations from standard procedures
Theme-4: Policing processes	
S/ KP/41	Data security is paramount for Senior Officers even when this restricts their ability to improve training.
S/ KP/42	BWC data is sparingly used in training, unlikely to be streamed in real-time and not analysed using machine learning or artificial intelligence techniques.
Theme-5: Emotions and learning	
S/ KP/43	Senior Officers intent on achieving UAE's Vision interpret BWCs as a continuous improvement tool using footage extensively in training and re-training
S/ KP/44	Senior Officers listen to feedback from practice and specialist opinions to work with supply partners to improve the BWC technology
S/ KP/45	Few POs articulate their emotional attachments, understanding and changing these are part of the process of using BWCs to adopt new ways-of-working.
Theme-6: Practice shaping interpretation	
S/ KP/46	Senior Officers are reinterpreting how BWCs are introduced and the use that is made of them and the data they provide.
Theme-7: Wider Islamic/Arab culture	
S/KP/47	Senior Officers interpret the use of BWCs as helping secure human rights and evenly exercised justice within the Islamic and Arab culture and context characterising UAE.

Figure-5.41: Amalgamation of figures 5.23 to 5.29 – key points from Senior Manager interviews

CHAPTER-6 DISCUSSION OF DATA

This chapter heralds the beginning of the final analysis part of the thesis. Having reviewed literature and created a new analytical framework, chapter-5 detailed three data sets. These are now analysed in two stages. Firstly, the current chapter discusses the data inconsistencies, contradictions and coherences within the data interpreting body worn cameras (BWCs). In the following chapter analysis against previous empirical research and theory forms the basis of answering the research questions.

Chapter-5 presented three datasets without interpreting their meaning or discussing inconsistencies. Figure-6.1 shows the seven themes generated by data analysis and reduction (section 4.7) and in the middle column references enumerating 134 key points from summary tables in the chapter-5 data presentation, included as an appendix to Chapter-5, with section references on the right. In the table O/KP refers to key points from observation, CI/KP to key points from critical incidents, I/APSKP and Khalifa Police Station key points, and S/KP to key points from interviews with Senior Managers. Other interviews will be woven into the discussion.

From a data reduction viewpoint, this chapter aims to reduce these 134 key points from the data presentation into a manageable number that can be compared and contrasted with previous research in the following chapter. From an analytical perspective, this chapter interprets the data to begin answering what effects the BWCs are having (research question-1), how police officers (POs) are behaving in Abu Dhabi policing (research question-2) and why particular interpretations of BWCs are accepted or discounted (research question-3)?

Structured by seven primary codes, each section of the discussion refers back to the five major variables figure-3.4 designed to show how interpretation of BWCs occurs in practice: (1) individual sense-making, (2) within the Abu Dhabi police organisation, in the UAE's Arab and Islamic (3) context and (4) culture, enable and stimulate (5) learned interpretations (the centre-point in figure-3.4). Plurality of interpretations is important since viewpoints, as this chapter will show, vary over time, they clash between levels of hierarchy becoming negotiated, discarded or accepted. This research focuses on the PO viewpoint and perspective.

Themes from coding	Key points noted from three dataset presentations	Dataset and section reference
P2C and C2P behaviour	O/KP/1 to 6 CI/KP/1 to 3 I/APSKP/1 to 2 I/KPSKP/22 23 S/ KP/37 38	Observation data, section-5.1.1 Critical incident data, section-5.2.1 Alshabiya Station data, section-5.3.1 (Theme-1) Khalifa Station data, section-5.3.2 (Theme-1) Senior Manager data, section-5.3.8 (Theme-1)
Changing occupational culture: P2P	O/KP/ 7 to 9 CI/KP/ 4 and 5 I/APSKP/3 and 4 I/KPSKP/24 25 26 S/ KP/39	Observation data, section-5.1.2 Critical incident data, section-5.2.2 Alshabiya Station data, section-5.3.1 (Theme-2) Khalifa Station data, section-5.3.2 (Theme-2) Senior Manager data, section-5.3.8 (Theme-2)
Power and hierarchy	O/KP/10 and 11 CI/KP/6 and 7 I/APSKP/5 6 7 I/KPSKP/27 28 29 S/ KP/40	Observation data, section-5.1.3 Critical incident data, section-5.2.3 Alshabiya Station data, section-5.3.1 (Theme-3) Khalifa Station data, section-5.3.2 (Theme-3) Senior Manager data, section-5.3.8 (Theme-3)
Policing processes (back office)	O/KP/12 and 13 CI/KP/8, 9 10 I/KPSKP/30 31 S/ KP/41 42	Observation data, section-5.1.4 Critical incident data, section-5.2.4 Khalifa Station data, section-5.3.2 (Theme-4) Senior Manager data, section-5.3.8 (Theme-4)
Emotions: learning/attachment/touch-points	O/KP/14 and 15 CI/KP/11 and 12 I/APSKP/811 12 I/KPSKP/32 33 S/ KP/43 44 45	Observation data, section-5.1.5 Critical incident data, section-5.2.5 Alshabiya Station data, section-5.3.1 (Theme-5) Khalifa Station data, section-5.3.2 (Theme-5) Senior Manager data, section-5.3.8 (Theme-5)
Practice shaping interpretation	O/KP/16 and 17 CI/KP/13 and 14 I/APSKP/13 14 15 I/KPSKP/34 35 S/ KP/46	Observation data, section-5.1.6 Critical incident data, section-5.2.6 Alshabiya Station data, section-5.3.1 (Theme-6) Khalifa Station data, section-5.3.2 (Theme-6) Senior Manager data, section-5.3.8 (Theme-6)
Wider context and culture: Islamic and Arab	O/KP/18 CI/KP/15 I/APSKP/16 17 18 I/KPSKP/36 S/ KP/47	Observation data, section-5.1.7 Critical incident data, section-5.2.7 Alshabiya Station data, section-5.3.1 (Theme-7) Khalifa Station data, section-5.3.2 (Theme-7) Senior Manager data, section-5.3.8 (Theme-7)

Figure-6.1: Showing primary themes and sub-themes structuring discussion of date coherence
(NOTE: middle column refers to summarised key points in Chapter-5 tables)

6.1 Theme-1: Police to citizen (P2C) behaviour

Evidence from Abu Dhabi highlights three major differences between groups of POs relating to P2C and C2P behaviour each arising from their experience of using BWCs.

6.1.1 Technical differences interpreting P2C behaviour

A first set of disputed interpretations in the data might be termed technical. A small group of POs during observation, critical incidents and interviews find technical fault with the BWCs or procedures for using them, a much larger group of POs in all three data sets applaud the use of BWCs mainly as protection from complaints and Senior Officers during interviews approve of the BWCs are enhancing their control.

Technical issues raised by some POs (a) draw attention to battery failure (PO Ahmed's interview is an example), (b) failing to inform citizens that the BWC is operational (O.21.11; O.27.11 are examples), (c) forget to wear the BWC (CI/24), (d) switch off the BWC at the wrong time (for example O.27.11 and CI/19) or (e) failed to point the BWC at the most relevant evidence (see O.7.12). These issues are technical in that they relate to trained procedures not being followed or the individual PO's experience in the technical operation of the camera. These technical issues relate to the lived experience of Patrol Officers. In sharp contrast, the experience of Senior Officers is that the failure of Patrol POs to carry out instructions results in loss of evidence. Technical issues are ones that will increasingly be resolved as POs learn to operate the BWCs as instructed by Senior Officers (note PO Saeed's experience and Waleed's actions in the Security Branch).

This technical area of conflicting interpretation of P2C behaviour is likely to be short lasting as Senior Officers identify and control PO behaviour using counselling or the disciplinary system.

6.1.2 P2C and C2P behaviour differences and interpretations

A second set of disputed interpretations of P2C behaviour is within junior POs ranks and between junior and Senior ranks. While Critical Incidents and interviews draw attention to crimes and the use of BWC, it is worth noting that over 700 hours of observation, only twenty-two incidents were observed, less than half of which were crimes: close to one crime for each seventy hours of policing. This is a key point from observations (O/KP/1).

All ranks agree that PO behaviour to citizens and citizens' behaviour to POs improves with BWCs indicating different interpretations of the BWC within the junior PO ranks.

Senior Officers differ from junior POs in highlighting changes in both PO and citizen behaviour exemplified by Mansoor's (I/KPSKP/22), Waleed and Saad KH (all in section 5.3.2).

While some junior POs resent being obliged to use BWCs (for example Jasem, section 5.3.2), others are happy with additional protection against unfounded citizen complaints (I/APSKP/1). An enthusiastic group believe their ability to perform is enhanced by BWC, for example parking (PO Salem CI/12; Sami from SSC, section 5.3.5; Khalaf from Community Security, section-5.3.4): each gain confidence and perceived capability from BWC use.

Differences in PO interpretation of BWC include (a) a rejectionist group, (b) an accepting group and (c) an enthusiastic group. The entire group of Senior Officers express support for BWCs, however, while they share some reasoning with junior POs (less complaints, ease of complaint resolution), the Senior Officers also view BWCs as driving continuous improvement in the form of standards compliance by junior POs.

6.1.3 Motivation

Linking with the final points above, the third conflict of interpretations of P2C behaviour resulting from wearing BWCs is in motivation. All junior ranks emphasise the protection offered by BWCs against citizen complaints or (SSC) challenging decisions. Senior Officers, who handle complaints, echo this viewpoint, however they have a wider motivation: eradicating street-level corruption and using BWC materials as a continuous improvement driver in training and counselling. Additionally, Senior Officers mention eradicating corruption (S/ KP/37) and improving the quality of future training as beneficial effects of BWCs.

In summary, interpretations of BWCs in so far as they alter P2C behaviour vary, although the dominant view is that citizens and police improve their behaviour when monitored by BWCs.

6.2 Theme-2: Changing occupational culture: P2P behaviour

Junior PO autonomy and the nature of the Abu Dhabi police occupational culture are being reshaped by the introduction of BWCs. Data suggests important differences of opinion in the direction these changes are taking.

6.2.1 Multiple occupational cultures

In interviews, POs expressed the view that BWCs reflect a modernising and professional Police Force in which they take pride (see Jamal in 5.3.8). However, observations indicate some reluctance to film their partners fearing perhaps that Seniors may use evidence against their patrol partners. The use of the term “Seniors” by all groups during the data gathering is itself instructive of a dichotomy between Officer grade and lower grades of POs, suggesting multiple occupational cultures. Other sub-cultures with the police occupational culture include POs serving in Prisons and the SSC, for whom BWC are an unmitigated boon. Finally, Officers in technical support Departments (IT, Security), perhaps by nature of their professional background are technophilic and approve of digitisation. Overwhelmingly, however, the bonding between patrol POs appears strong and unaffected by BWCs, exemplified by reluctance to film partners when it may lead to trouble for the partner and negotiation with partners over who captures what on BWCs (CI/KP/4). Those POs viewing BWCs as protection against complaints (home visit) undoubtedly see BWCs as protecting both themselves and their partners.

6.2.2 Reduced autonomy

The POs, like other professionals and street-level bureaucrats have delegated authority, which they use to exercise judgement to resolve problems others find irresolvable; in this case preventing and solving crime and supporting a variety of socio-cultural activities. Some worry about their self-image as practicing POs in the eyes of Senior Officers (I/APSKP/4) or that Seniors will use the technology to spy (see Salem in section 5.2.5). POs were observed using BWCs to gather evidence of crime.

As practice evolves into patterns, group or individual POs will hear more of Senior Officer intentions to use footage in training and to strengthen rules of behaviour, by issuing strong rules or enforcing compliance with existing standard operation procedures. Some POs will view this as a diminution of autonomy; others who comply with operational standards may not feel their autonomy threatened at all. The belief of Senior Officers that upward accountability (S/KP/39) will increase with the use of BWCs may be confined only to POs not complying with BWCs. It is worth noting that

age does not seem to be a factor in interpreting BWCs and autonomy; POs of all ages adopt a positive interpretation.

In summary, the effect on autonomy of BWCs on those POs complying with operational standards may be minimal, with only those not complying being forced to do so.

6.3 Theme-3: Power and hierarchy

Social inquiry and ethnographic study always reveal the obvious more readily than invisible or hidden deeper meanings. So too here: observed POs and selected critical incidents reveal awkwardness in the physical use of BWCs reflected also in interviews with POs, whereas for Senior Officers the implications are much longer term and invisible alterations to power structures. The data from Seniors reveals an intention to exploit BWCs to increase control and introduce continuous improvement – in short they are part of a performance management agenda.

6.3.1 Power

The data shows some POs concerned with shifting power up the hierarchy, with a greater number of POs instead referring defensively to protection against C2P complaints (I/APSKP/5 and 6). More clear-sightedly, data from several middle managers (for example the Prison Lieutenant) gives an alternative sharper view: BWCs redistribute authority from Station or Patrol managers to Seniors, giving them the ability to alter PO behaviour by rule-making, counselling or discipline. In another sense also the data from Senior managers conflicts with other POs: the objective data from BWC, less reliant as it is on memory or on-the-spot interpretation of decisions and events, provides a new more objective epistemic viewpoint: however, as the data reveals, this is only available to Seniors; no longer is the footage available to middle managers, and only exceptionally to junior POs (. Additionally, whereas in the wider police occupational culture Senior Officers may have felt pressure to accept the PO's viewpoint in a contested case, data shows this downward loyalty now challenged by the ability of Seniors to consult footage (I/APSKP/7).

6.3.2 Standardisation

Several POs refer to BWCs reducing their flexibility, handling issues with informality instead of *by the book* (O/KP/11; CI/KP/7). In contrast, Senior Officers repeatedly

refer to using BWCs to impose adherence to standard operating procedures (CI/KP/6; S/ KP/40). Some of this tightening up on PO behaviour emanates from Seniors spotting potential dangers and advising POs risk-reducing activities i.e. new rules, however, mostly data shows Senior Officers using BWCs to ensure compliance with existing rules (O/KP/10; I/KPSKP/27): seeking to improve standards by standardising behaviour, by expanding their span of control. This is another example of PO data focusing on the immediate and Senior Officer's data concentrating upon manipulating the hidden essentials.

6.3.3 No hierarchic change

UAE is a rich country, yet in recent years the Government has announced policies to reduce public employment and expenditure (*Vision 2030*). No interviewee refers directly to these policies. Apart from the expansion of IT-related sections (see Jaber in 5.3.7 and comments from Security and Information Technical sections), there is no mention of organisational change or restructuring. Yet, as I discuss below (section on AI) digitisation of public services is a meta-trend, inevitably involving transformed structures. There are statements by Senior Officers alluding to what might be future change; a conflict in the data is that no junior PO makes any reference to digitisation threatening police numbers.

6.3.4 Coordination with and between specialist sections

IT-related specialist section Senior Managers represent areas of expansion and investment in Abu Dhabi Police (security, IT). Senior Managers view coordination between sections as becoming ever more important (S/ KP/40) legitimising the modernisation of the Police Service and its use of advanced technologies.

6.4 Theme-4: Policing processes

Comments on back office systems and wider policing processes connecting with the judicial system reveal that junior POs are disconnected from these processes, whereas for Senior Officers they are important.

6.4.1 Confusions

There are conflicts between datasets, mainly reflecting the better-informed nature of the Senior Officers. Some POs believe they can delete BWC footage, which they

cannot (Sultan, Senior Officers, Theme-3). Numerous patrol POs refer to accessing BWC data to help completion of shift reports, when, it is clear from Sultan that only in exceptional circumstances do patrol POs consult the BWC footage. Numerous POs refer to the intermittent nature of BWC introduction (for example, POs Ahmad, Tariq), some suggesting reasons for this by Yasser (Field Photography) clarifies the position, indicating how the technology was customised to meet Abu Dhabi's needs.

6.4.2 Senior Officers and wider police processes

By the nature of their roles and responsibilities, Senior POs are more concerned with the wider judicial system and complaints procedures. This means they are affected more than junior POs by incomplete or poor quality BWC evidence and therefore strive to ensure quality and completeness of BWC footage, in particular where POs fail to record time, data, place and overview of incident or when only one PO records. The contradiction is that some of the failures to record effectively are a result of lack of training (I/APSKP/9), for which the Senior Officers are responsible (I/KPSKP/30).

6.5 Theme-5: Emotions: learning/attachment/touch-points

Data reveals that while junior PO's learning relates to their practical use of BWCs, learning which involves emotional re-attachments, Senior Officer data focuses much more on performance management issues and does not mention emotional change.

6.5.1 Learning

All technology innovations have unforeseen and/or unintended consequences, they also disrupt roles and relationships requiring learning new ways-of-working. The data shows POs at all levels actively learning to use and then interpret the meaning of BWCs. At the level of Patrol POs most of the learning as stated above is technical: how to physically use and adapt the use of the BWC (I/APSKP/11), including innovative uses, such as taking the BWC off in order to better capture relevant footage. Some POs make technical improvement suggestions, such as including GPS in the device (I/KPSKP/32). Other POs mention on/off signalling to citizens, 360-degree image capture and time/place recording. In contrast Senior Officers are learning how the BWC can increase their control by monitoring compliance with existing SOPs and creating new SOPs. Additionally, Senior Officers are interpreting feedback from Patrol usage and discussing with suppliers how to improve the technology (S/ KP/44). In summary, all

POs are learning as a result of the BWC introduction, the data however shows a contrast between types of learning: for Senior Officers and junior POs learning relates to using and improving the technology; for Senior Officers learning is also about how to use the technology to exercise greater control.

6.5.2 Emotional attachments

Learning involves emotional attachment (to old ways-of-working) and re-attachment to new ways-of-working, involving roles and relationships. For Patrol POs, these roles and relationships constitute their identity as POs: their self-esteem, honour, place in society. Re-attachment to new ways-of-working can therefore be an emotional wrench. Emotions play a much larger part in the testimony of junior POs than their Senior colleagues – another conflict in the data. We see POs worrying that turning on the BWC may result in evidence bringing trouble (O/KP/14) or heightening stress (CI/KP/11); though some (mainly but not only specialist) Officers such as Parking, Prison, SSC attribute stress-reduction to the BWC. In particular, working with Patrol partners is a key emotional touch-point for POs, some of whom worry the BWC footage may be used against their partner. If in future, low crime rates and Government drive to reduce public employment result in displacement of POs, this will add a major emotional concern for POs (see Khaleej Times 2018). Here, by way of summary, I note that junior PO emotional attachments figure in the datasets, whereas no Senior Officer comments on this, as major difference between the two.

6.6 Theme-6: Practice shaping interpretation

In this research there was a tendency for POs at all levels in Abu Dhabi Police to positively interpret the introduction of BWCs. Chapter-7 discusses how Abu Dhabi POs are interpreting BWC, compared to POs in other contexts and cultures as evidenced by previous research. Here I note conflicts in the data: that at a junior level this interpretation focuses on technical, usability and procedural matters, Senior Officers are concerned with long-term control and standardisation. Emirati national identity is relatively new (only 47 years old if 1971 is taken as a start point); National Day (2nd December) is a genuine celebration; why not, since nationhood has brought Emiratis a good life in only two generations. Clan and family are the key reference points, not class and hierarchy. None of the POs refer to national identity. The few who refer to technology and the future are technophilic – modernising technology is an unmitigated

positive. Chapter-7 digs deeper into this seeming coherence and absence of conflict in the data.

6.7 Theme-7: Social culture: Islamic/Arab

One popular television programme in UAE is *Freej!* a major theme is Emirati women forgetting traditional ways and values. What used to be known as the Trucal States has transformed over two generations into a modern globalised economy; but what of Emirati society? How powerfully does the Islamic and Arab culture impact on how Police Officers (POs) use and interpret technologies such as body worn cameras (BWCs)? Also, what of the particular context affecting police: to what degree does context influence how technologies such as BWCs are interpreted in a 90% migrant economy with rapidly modernising public services, yet with already high living standards and a *Vision 2030* aiming to transform away from oil dependency?

6.7.1 Context

Fish can't see water: elements of context and culture can be so obvious and predominant that we take them for granted. As section 6.1.2 mentioned, in three months observation of police patrols, we were called to 21 incidents, half of which were not crimes. Low crime rate in UAE is a common feature of policing and police culture. Only the Senior Officers appear conscious of this from the data; their concern is how UAE is portrayed in terms of human rights and Treaty compliance not only everyday crime (S/KP/47). Junior POs focus on the latter and not the former. There are issues in everyday crime, such as the contradictory advice on dealing with 'sensitive' situations (section I/KP/16). The Arab context enjoyed by Emiratis is one where dishonour is important to the whole family; this disciplines behaviour and sets an example for migrants, who also know that crime is likely to result in immediate justice, involving deportation.

6.7.2 Culture

It is not the purpose of this research to disentangle Arab from Islamic culture. Evidence from all levels of Abu Dhabi police shows acute consciousness of guardianship for women, including by the women POs (O/KP/18; CI/KP/15; I/KP/17; I/KP/18; I/KPSKP/36). In practical terms this introduces a cultural dimension to BWCs not found elsewhere: imaging women in the home or disrespectfully (dress or actions) is illegitimate and unacceptable. In turn, women citizens seem to expect that POs will

exercise Guardianship. This prescription extends to the private/public boundary at the home: explicit permission is required from Seniors to enter a home and from the homeowner to film in a home. Police acceptance of these cultural imperatives seems to be an important aspect of their P2C legitimacy. Police at all levels and all ages and both genders accept these cultural norms, so much so that POs from ‘A’ Police Station barely comment upon them.

In summary, importantly context and culture shape police interpretations of BWCs at all levels of policing, however, changes in context (effectively performance management issues) remain solely the concern of Senior Officers.

6.8 Summary and links

Before proceeding to analysis and answering the research questions, this chapter has taken a pause to reflect on the fact that there is no single interpretation of BWCs by Abu Dhabi police: evidence shows nuanced differences and sharp disagreements between datasets and within datasets. There is unanimity around issues such as care in photographing women and recording in homes but deeply different interpretations between Senior Managers and many junior POs: the major fault line dividing interpretations surrounds hierarchy and power. However, as the following chapter shows much greater differences in interpretation exist between police in Abu Dhabi and elsewhere – these relate to context and culture.

CHAPTER-7 ANALYSIS

The purpose of this chapter is to answer the three research questions posed in chapter-1 and justified in chapter-4. In each case previous research, both empirical and theoretical, relevant to the research question is cited and then contrasted with the actual finding from practice by police using body worn cameras (BWCs) in Abu Dhabi. From this platform an interpretation of meanings is suggested and discussed arriving at an answer to each of the three research questions. The following chapter draws together all of the strands of this research highlighting its theoretical and empirical contributions and commenting upon implications for public policy, suggestions for further research and offering a publication and dissemination plan. Structured around the three research questions, answering the first question details previous research and findings from the research structured by the seven major themes arising from coding. Analysis and discussion around question-2 is structured using the six major effects of BWC on police officers (POs) in Abu Dhabi identified from answering research question-1. Discussion answering research question-3 is structured around the four main variables in the figure-3.4 framework-1, developed in the section into a framework-2.

7.1 RQ-1: *What effects does the introduction of body worn cameras have on police officers in Abu Dhabi?*

Answering research question-1, this section connects between (a) previous research findings on the effects of body worn cameras (BWCs) on police officers (POs); (b) the findings of this research, referencing the three datasets (observation, critical incidents and interviews); and (c) sense-making analysis of what is actually happening to Abu Dhabi POs as a result of BWC introduction.

This qualitative research makes no positivist claim to establish definitive causal linkages. As with all qualitative research *effects* in the research question implies causality when using BWCs cannot be isolated as a variable, especially not in UAE where socio-economic change is so rapid; Nowacki's (2006) point is apposite - that weakly attributed causality may be all that is possible. Taser (2014) unhindered by the rigour of academic research are able to definitively claim that in using BWCs *truth leads ... erroneous allegations are silenced* with lower investigation costs and higher prosecution rates. Only less definitive and more carefully qualified results can be

expected from social research. This is particular so when there is such a small research base on BWC in Islamic and Arab cultural and contextual settings making this research exploratory – definitions and causal relationships are being formed, they are not yet established and capable of quantitative testing. Taser (2014) makes its claims for all of the over one hundred countries in which it sells, being able to disregard differences that culture and context invariably make.

This section is entirely empirical, reflecting the ‘what’ nature of the research question. In the following two sections, framework-1 (figure 3.4) is used to analyse and make sense of data pertaining to ‘how’ and ‘why’ questions. Here the section is structured by the primary codes that emerged as key themes in data analysis; the same themes employed in data presentation.

- Theme-1 P2C behaviour (two-way)
- Theme-2 Changing occupational culture i.e. P2P
- Theme-3 Power and hierarchy
- Theme-4 Policing processes (back office stuff)
- Theme-5 Emotions: learning/attachment/touch-points
- Theme-6 Practice shaping interpretation
- Theme-7 Social culture: Islamic/Arab

Each section is broken down using sub-themes also derived from data analysis and justified in section 4.7. In each case after summarising previous research findings and comparing these with findings from Abu Dhabi, the meanings of the results are discussed and their contribution towards answering the first research question.

Flowing from in-to-out, individual POs via the wider police organisation and its social impact to wider culture, this section is purely empirical. Many of the points raised refer to the expectations, beliefs and anticipated results of BWCs. This is partly because the BWC introduction is new to Abu Dhabi (two-years only since roll-out, though short-term trials commenced in 2012) and also POs interpretations are changing in response to patterned usage of the BWCs.

7.1.1 Theme-1: P2C behaviour effects of BWCs

Previous empirical research on the use POs make of BWCs focuses the perception that they provide protection against unjustified complaints, noting Sandhu's (2017) proviso that the BWC also alters PO behaviour and thus reduces the need for legitimate complaints. The other major theme from previous empirical research is the issue of PO autonomy, which is discussed below (section 7.3). Coding reveals a different important sub-theme arising in Abu Dhabi policing – the issue of boundaries between public and private and activity and the social acceptance of recording in one and not the other.

C2P protect against complaints

The American Council of Civil Liberties, citing the Rialto, California research claims that compared to non-wearing of BWC, POs wearing BWCs enjoy an 88% decrease in complaints (with a 60% decrease in the use of physical force by POs). UK (College of Policing 2014:8) makes the interesting point that *BWV may contribute to a net reduction in complaints and subsequent disciplinary action, by providing a clear and impartial record of any interaction* i.e. reduced complaints save time investigating complaints. UK evidence from the Metropolitan Police (London Police 2016:12) suggests that, *BWV has reduced the number of complaints against Police Officers and has increased the public's confidence in the policing actions*. This is coherent with Ellis *et al's* (2017) findings from the most detailed survey of public opinion on BWCs in the UK: 82% of the public support the police use of BWCs. Interestingly, data from the North of Ireland shows that BWCs cost £8,000 (capital and revenue) per year, which could be computed against the cost of complaints investigation to show net gain. Research in Renfrew and Aberdeen, which combined 5,000 patrols wearing BWCs resulted in a total of seven complaints against the police, concluding that *There is an indication that there may have been a reduction in complaints against police officers when BWV is worn – and that the amount of police time that is required to deal with any complaints received is often less when BWV is worn*. Only one of the seven complaints were substantiated i.e. one in 5,000. Goodhall's (2007) Plymouth, UK study, found that a 50 BWC trial reduced complaints. In Scotland (Renfrewshire and Aberdeen; 38 and 18 BWCs) ODS Consulting (2011) found that Officers supported BWC since they enhanced their ability to counter citizens' complaints.

Sandhu's (2017) summary of previous research is that by altering police behaviour *and* citizen behaviour BWCs significantly reduce complaints against the police by citizens.

It is not possible from prior Abu Dhabi research to give a quantitative estimate of complaint reductions, and in any case it would be unclear if the reduction arose from altered police or citizen behaviour, or some other cause. What is clear, as section (7.1.1) notes, is that junior POs at all levels, across all specialist sections of the force, and all senior officers *believe* that BWCs reduce complaints. Data from observation (5.1.1), critical incidents (5.2.1) and interviews (5.3.1) each arrives at the conclusion that BWCs are perceived by officer to have reduced citizen complaints against them (including citizens in prison, 5.3.4).

Data from UAE confirms research conclusions, that wearing BWCs results in less complaints against POs according to perceptions of the POs interviewed for this study. But does this reduction arise from changes in police or citizen behaviour, and how deep is the change – is it likely to persist i.e. is the change short-term behavioural or longer term attitudinal?

Jennings *et al's* (2015) Orlando study suggested that in 25% of cases Officers suggests that BWCs altered their own behaviour. Smykla's (2015) research in the US argues that police behaviour change is by reducing over-reacting to incidents and/or media attention. Neither seems the case in UAE, where behaviour change appears more *being polite* (5.3.5) and *taking care* (5.3.1 for example).

Owens (2014) study in Essex (UK), is mainly concerned with police legitimacy, however he finds that police perceive BWCs as similar to CCTV i.e. technological capturing of evidence. He suggests that POs were more likely to press charges when evidence was BWC recorded. In UAE, POs appear more likely to act formally (O.7.12), however, due to the relatively low crime rate and culture of street-level counselling, that there is no evidence of increased charges being pressed and anyway in the UAE system, this is a PF decision. Evidence from previous research is mixed over whether BWC result in increased arrests or charges: Morrow (2016) like Owen (2014) suggests arrest rates rise. My view from the UAE data is that BWC have little effect on arrest or charge rates at present.

Privacy boundary

West Midlands Police privacy impact assessment (PIA W Midlands) of BWCs and privacy concluded that POs need to justify recording. In private homes the justification criteria are pressing social need and/or genuine policing purposes; discretion lay with the POs not the subjects. As the UK College of Policing (2014) policy notes, *Under normal circumstances, officers should not use BWV in private dwellings*. Abnormality here then means evidencing crime, with POs called to private homes to investigate an incident presuming the need to evidence and therefore recording. Researchers in the US (Gaub *et al* 2016; Hedberg *et al* (2016; Katz *et al* 2015; White 2014; Morrow *et al* 2016) conclude that considerations of privacy are shaped by the occupational culture into which BWCs are introduced.

As section 2.6 notes, the privacy boundaries are drawn differently and are more rigorously imposed in UAE. The data shows two important differences for privacy between UAE and the US and UK culture and context cited above. Firstly, there is a prohibition from Senior Officers and discomfort from junior POs (5.3.1) recording women even in public spaces if the circumstances are un-Islamic (immodest behaviour such as stages of undress, drunkenness or loud speaking). In the UK (Owens *et al* 2014) these are some of the very circumstances in which young women are recorded. Secondly, the sanctity of the home is particularly strong in the UAE: POs must ask permission to enter or receive permission from Senior Officers and then seek permission from the (male) homeowner before they can record with BWCs. As a number of POs say, wearing the BWC makes POs act more formally.

Research elsewhere notes that cameras can point in two directions. Research in Canada by Sandhu (2017) finds police are upset when citizens record PO actions. One of the few researchers to take the PO's perspective on BWC, Brucato (2015) argues that BWC can encourage citizens to record police citing examples from Occupy Wall Street and the group *Photography is Not a Crime*. There are no reports of such behaviour by citizens in UAE, t in part due to the greater legitimacy of the police relative to the US.

Privacy is more rigidly defined and more strictly observed in UAE, being a cultural more in addition to a police standard operating procedure proscribing the use of BWCs

of people (especially women) in public places that would be normal in western contexts and giving discretion to citizens in UAE regarding recording in the home, that in the west would reside with POs.

To summarise, P2C behaviour is governed by the low crime rate and Islamic morès relating to home and women the cultural and contextual are important influences on how police interpret the BWC. Police overwhelmingly report that BWCs have an improving influence on their own behaviour and that of citizens towards POs.

7.1.2 Theme-2: Changing occupational culture i.e. P2P effects of BWCs

Section 5.1 notes the informal and non-crime nature of many P2C interactions in Abu Dhabi underscoring the absence of the *them-vs-us* occupational culture found between US and UK police and at least some sections of their societies. One of the reasons POs either fail to notify citizens that the BWC is active (O.10.11 example) or turn on the BWC (O16.11) is the informal nature of these interactions. CI/9 was selected to illustrate the success of informality, mitigated by (for example PO Saeed) concern at recording his partner, PO Tariq feeling he now enforces the *book – not by the spirit of the law*. PO Saeed is more *careful of what I say and do*. Young and Ready's (2016) conclusion that occupational culture shapes behaviour insufficiently grasps the nuances of what BWC usage in Abu Dhabi entails: here, occupational culture does influence behaviour, but is also being reshaped by the new attitudes and behaviours mentioned above.

One aspect of the non-linear impact of technology transfer as Rodik (2017) and many other researchers point out, is that technology embeds rules and presumptions, formality into informal settings or settings with other morès.

Such are the cognitive biases in, for example US Police occupational cultures over race, that Mears *et al* (2017) finds BWCs fail to alter occupational cultures. There is no evidence of such biases towards sections of the Emirati population or migrant population in UAE in the current study, instead BWCs significantly impact upon occupational cultures where POs add the comfort of recording events and decisions – the SSC and Prison being an example (section 5.3.5; and section 5.3.8, Theme-2).

Katz's (2015) Phoenix study finds that Officer approval rises with familiarity, however Headley *et al's* (2017) later study, a survey and data analysis in Florida, suggests that approval by Officers falls as they realise BWCs will not automatically result in reduced citizen complaints or their need to use force. Use of force, including handcuffing restraint is rare in Abu Dhabi. Unfortunately, my data cannot track changing attitudes and usage over time, however numerous POs involved in a series of trials (some since 2012) show no diminution in acceptance of BWCs.

Non-usage might be taken as a surrogate for lack of confidence in BWC. US research suggests that volunteer Officers only activated BWCs in 67% of incidents while for non-volunteers it was 51%. Observations in Abu Dhabi too shows tendency toward BWCs. However, this is the result, as numerous POs report of forgetting to return the BWC from the car to the holster and not lack of confidence in its usefulness. As senior officers systematically monitor and insist on usage, the percentage of none use is likely to fall considerable, particular since PO occupational culture tends to support their adoption.

Kyle and West's (2017) survey of 201 Officers' attitudes in two US states interestingly finds that higher Officers and women Officers show most approval of BWCs as do lower Officers with a high sense of justice and proclivity towards innovation and organisational change. The UAE study did not analyse data in terms of quantitative sums, but in qualitative terms the study indicates the ways in which officers from different ranks and genders spoke about their support for BWCs.

Seniors and women do support BWCs (Seniors, women), although my samples are not representative, it was significant to report that the respondents tended to be supportive of the introduction of BWCs for the reasons outlined in chapter 6. If there is a sub-culture less in support of BWC in UAE, then it is amongst middle managers, who's area of discretion and span of control is somewhat reduced by BWCs since only Senior Managers have access to the footage and can therefore instigate consequential actions in relation to POs.

Occupational cultures emerge from *logic of practice* (Giddens 1984), practice of P2P and P2C behaviour as street-level bureaucrats. For McCoy (2010) an important aspect of professionals operating at street-level is their self-regulation. Section 7.1.3 below

considers arguments about policing as a profession or craft. Here, I note that Abu Dhabi police occupational culture contained, in the views of Senior Managers (see Manning 2007) some degree of corruption, which they believe BWCs will help eradicate.

The small amount of research elsewhere examining the women PO's perspective does not focus on BWC but instead on motivation, suggesting women POs are more intrinsically motivated than men (Chu 2017) albeit role gendering is strong (Schvaneveldt *et al* (2005) and women POs show more support for BWCs than their male colleagues. Section 3.2.3 noted that some 10% of UAE POs are women and just less than 10% of these are promoted. Women do not normally undertake car patrol functions in Abu Dhabi and therefore do not normally use BWC. However, in the SSC team (section 5.3.5) Fatima and Aisha do use BWC, and strongly support using BWCs for precisely the same reasons as their SSC male colleagues i.e. recording events and decisions. There is no evidence in this study therefore, that women POs in Abu Dhabi differ from their male colleagues in the strength of their support for BWCs as Kyle and West (2017) suggest.

Security by surveillance seems popular in UAE, in so far as police occupational culture is shaped by public expectations (Sklansky's [2007] *cognitive burn-in*), POs see public acceptance of BWCs as a reinforcing of their use and reproducing an already (publicly accepted) police occupational culture. This is the major point about Abu Dhabi's police occupational culture: there is little evidence of an us-vs-them antagonism towards the police (the racism in US and UK policing being examples), instead evidence here suggests an overall policing occupational culture acceptable to police and citizens, though within it there are sub-cultural tensions between Senior and junior POs.

This section surveys evidence on the actual use and effects of BWCs in Abu Dhabi and how BWC use effects and is affected by police occupational culture, comparing the results with evidence from previous research elsewhere. Analysis shows that there is no us-vs-them occupational culture in Abu Dhabi police, based on racism and illegitimacy in the eyes of citizens. Instead, the police occupational culture is deemed relative legitimate and, in an environment, accepting security by surveillance. Citizen acceptance of BWCs reinforces PO acceptance based primarily (section 7.1.2), somewhat ironically, on a fear of complaints from citizens. BWCs then are reshaping

police occupational culture into accepting the wearing of BWCs. There is some concern amongst POs that recording their partner will create trouble for their partners, however, since no occurrence of this was reported, its importance is perhaps diminishing. Embedding formal data gathering and transmission to Seniors, as BWCs do, is creating formalities in behaviour within the occupational culture. While men and women PO sub-cultures similarly support BWCs, there is a tension between Senior Officers and junior POs on how the data from BWCs may be used. POs in Abu Dhabi continue to view themselves as professional public service staff delivering service in which they take pride. In so far as the occupational culture is changing as a result of the BWCs, the changes are positively reinforcing its legitimacy and usefulness as a guide to practice.

7.1.3 Theme-3: Power and hierarchy - effects of BWCs

Police organisation is ambiguous: on the one hand there is a formal command-and-control structure directing resources to crime scenes and alternatively autonomous service units deeply engaged in social events and community policing in which interactions between POs and with citizens is crucial to success. Waddington captures this duality referring to both a *punishment-centred bureaucracy* and making practical compromises (1999:300) in organisational form to deliver services. For Hedberg *et al* (2017) BWC introduce into this mix, new issues for (formal) procedural justice and (informal) interactional justice. Whereas for context in which policing is illegitimate police are scrutinised when there is a problem (Waddington, 1999), where policing is viewed as more legitimate, such as in the UAE, the police being noticed potentially offers a civilising and security effect in social order.

There are no discernible effects of BWCs on hierarchy in Abu Dhabi police, except that they form part of a trend to invest in information technologies. As the London Metropolitan Police (2014) indicate, this is a general trend in effective policing. In UAE's case, POs from Security, Visual Capture etc sections illustrate how specialist branches of the hierarchy are strengthening, with BWCs as a data gathering technique, as part of this trend.

Police organisations everywhere have tall hierarchies, many more than modernised public services (Osborne 2010), which led Goldsmith (1990) to conclude that Senior

Officers are remote from street-level (relatively autonomous) Patrol POs. Section 3.4.2 considers also the point that while junior Officers focus on horizontal relations (P2P partners and colleagues) and P2C (downward relations), Senior Officers apart from managing their juniors have significant ‘upward’ relations with policy-makers, media, the judicial system and complaints procedures. Prior to BWCs policing technologies have helped bridge Goldsmith’s remoteness gap. Examples are (a) standard operating procedures (SOPs) are rules of behaviour prescribed by Seniors for junior POs; (b) GPS in cars and (c) in-car and peripatetic video capture: all provide data for Senior Officers to control patrol PO’s behaviour.

A tall hierarchy always capable of creating new SOPs is now better able to monitor and thereby enforce compliance using BWCs. POs believe that BWCs by evidencing P2C behaviour and improving C2P and P2C behaviour will help protect them against disciplinary action by Senior Officers. PO Salem (section 5.3.1, Theme-3) says, *the camera is my lawyer* a sentiment echoed by numerous POs, noting always Saad’s (5.3.2, Theme-3) proviso against Seniors capturing informal discourse or evidence against partners. Throughout the section 5.3.8 interviews Senior Officers do refer to using discipline and counselling for breaches of SOPs, however, their interest as Arif (Theme-2) reveals is continuous improvement of the service. Correcting error for Sultan is only part of the new powers accruing to Senior Officers, they intend to imitate the performance management and continuous improvement cultures they observe internationally.

Reducing autonomy then is not about de-professionalising the Abu Dhabi police. Alpert and Smith’s (1999) research noted that POs have always been called upon to justify their decisions. Without micro-management, which is impossible as Chan (2001) argues, the span of control available to Patrol POs will remain wide. Remote controlled policing by real-time *dataveillance* is not an option, since BWC footage will not be real-time streamed and anyway as Ariel and Wain (2014) observe would remove the P2C interactions and practical compromises that Waddington (1999) deems necessary for effective policing. Minimal supervision (Manning 2007) not maximum interference is what Senior Officers aim for – however, within the SOPs they want professional wisdom exercised and legitimacy in the eyes of citizens within prescribed standards.

Reducing autonomy then for Senior Officers is not aimed at control per se, rather at control to achieve standards compliance.

Waddington's *punishment-centred bureaucracy* is an apt description of Abu Dhabi police given its tall bureaucracy. However, senior officers actively use BWC data not only to enforce SOPs but also by introducing rising standards of expected behaviour. For what appear to be those POs not adhering to SOPs, BWC are a tool for Senior Officers to reduce their autonomy, the rest do not appear to face reduced autonomy with Seniors recognising that as professionals they continue to make important judgements and enjoy a wide span of control over their activities in (for example) counselling, warning, and arrest decisions.

7.1.4 Theme-4: Policing processes - effects of BWCs

Policing processes emerged as a primary theme in coding (section 4.7), with numerous sub-themes from which the four chosen for this section (justice, accountability, legitimacy and identity) are those most relevant to the 'what' research question. Section 2.7 discusses four areas in which governances might be affected by BWCs: place in the world, Government decision processes, human rights and technology transfer. It concludes that the top-down decision by UAE's Government to introduce BWCs is justified by its expected impact on areas such as justice, accountability, legitimacy (including privacy incursions) and identity as a modernising society.

Policing processes here mean the operational actions between the POs and the Abu Dhabi's police force's outcomes. Effects of the introduction of BWCs on policing processes are discussed here, leaving discussion on 'how' occupational cultures are affected by BWCs and 'why' to sections below. Connecting behaviour to abstract nouns, such as legitimacy and accountability is a major challenge for social science; this section explores what researchers elsewhere have found, what this research finds in Abu Dhabi and what effects BWCs are having on POs in Abu Dhabi. The main thrust of the section is comparing research elsewhere with data from Abu Dhabi under the four thematic headings mentioned.

Justice

Procedural justice or fair outcomes from policing, for police, all citizens and institutional stakeholders is important in policing; and Hedberg *et al* (2016) argue that BWC increase procedural justice. Wolfe and Piquero (2011) note that procedural injustice in policing results in dissonance and disrespect for the Force or organisation being exacerbated in the minds of some police and citizens in the aftermath of Ferguson. Discussion above on complaints, suggests that BWCs in Abu Dhabi are contributing towards procedural justice by reducing C2P complaints and by providing a defence (other than verbal testimony) against unfounded complaints.

Wider outcomes of policing include preventing crime and bringing criminals to justice in a way, which secures and maintains public confidence as the UAE Vision for Policing (2014) says. Essex Police (UK) suggest that the ‘criming’ of violent incidents increases from 71.8% to 81.7% after the introduction of BWC because evidence other than privileging PO’s words against defendant are available to courts, McMullen’s (2005) point. There there was nothing in the qualitative data to suggest that arrests rates would be increased by the introduction of BWCs.

Preventing injustice, Russiano *et al* (2005) note is equally important to effective policing. Interviews with Senior Officers in section 5.3.8 refer continually to procedural justice (SOP-compliance) indicating how more connected to wider juridical systems Senior Officers are than junior POs, including the human rights perception of UAE externally (S/KP/47). There is no evidence as Kyle *et al* (2017) suggest that senior officers and women POs have a higher sense of justice than junior and male POs or as Rowe (2007) found from his UK study of junior POs sacrificing procedural justice to secure convictions.

Hedberg’s (2016) distributive justice (prosecuting criminals) appears effective in UAE given the low crime rate, which even with a substantial transitory population remains low. BWCs have a potentially beneficial internal effect on procedural justice (less complaints, lower PO fears on unjust discipline). There is no discernible effect on externally facing procedural justice, which the present study could evaluate.

Accountabilities

Section 2.7 notes that accountabilities may cover a range of fields (financial, ethical etc), be multiple (upwards, downwards, horizontal or 360-degree and face varying consequences when not met (see McCoy 2010 and Taylor 2016). Previous research includes Loyen's (2009) argument that private police have stronger stakeholder accountability than public police forces and also Demirkol's (2017) finding that Turkish police have weak downward accountability (P2C) and strong upward accountability (P2G), a similar finding to Al-Rasheed (2007) in Saudi Arabia.

As Ariel and Wain (2014) note, Senior Officer accountability is always likely to be complicated by the wide range of stakeholders (including Government and complaining citizens) to whom they account. Junior POs too, as Saad in Khalifa Station implies (section 5.3.2) are accountable downwards (P2C), upwards (Seniors and horizontally to partners (P2P), as Arif the Patrol Manager states, including accountable for decisions taken when working autonomously or Yasser (SSC) working in a high-risk team. Seniors are seeking to increase the accountability of POs to SOP adherence (S/KP/39). BWCs are resulting in and enabling greater accountability by Abu Dhabi POs to each other, their wider stakeholder and citizens.

Legitimacy

Emiratis travel to and culturally reference both the US and UK; they are shocked by incidents such as the shooting of Michael Brown by police in Ferguson, Missouri or the Macpherson Inquiry into the death of Stephen Lawrence in London accusing the London Police of *institutional racism*. In part the shock is that in developed societies Emiratis seek to emulate a public service can act with impartiality based on race, when a small society home to over-100 other nationalities the police service's legitimacy is perceived by POs to be founded on an even-handed dispensing of justice. Unlike the US, whereas Wasserman (2014) argues, BWCs are part of an attempt to give (restore?) legitimacy to the police, (a tactic Culhane *et al's* (2016) research suggests is unsuccessful), UAE's Police, while at time complained about or moaned over, appear legitimate in the eyes of all of the population, to which O.9.11, O.10.11 and CI/9 for example, stand testimony. In summary, UAE's Police appear to enjoy legitimacy with citizens, legitimacy that supports their occupational culture and perceived identity, points supported by Hopkyns (2016).

Identity

Policing processes, like those of all organisations depend upon people. Especially organisations delivering services rely on the subjective experience provided to service users, including internal service users. Hochschild's (1983) idea of emotional labour is that a behaviour mask leads service users to a positive subjective experience even when the service provider is pretending. Of course, s/he may become enculturated into the role of offering users good experiences; this is Sennett's (2007) point; the craftsman always does the best job possible for the sake of pride in doing a good job. Individual pride in role identity is an important part of occupational culture, though conceptually separable, since cognisant/emotional individuals constitute the collective identity. One might interpret US racist policing as occupational culture dictating individual identity; seeing our identity (in Goffman's [1974] terms) as others wish. Individual relationships and honour (section 6.5.2) are important to Emirati identity and this is reflected in the pride POs take in their status and work.

Alterations to police practice in Abu Dhabi associated with the BWC have been analysed from the perspective of justice, accountability, legitimacy and identity suggesting that distributive justice (given the low crime rate) appears unaffected by the BWCs, Senior Officer accountabilities are affected since they now no longer rely on judging whether to believe the PO or complainant and citizen complaints have fallen. There is no discernible change in legitimacy resulting from the BWCs, which were not introduced to alter the already high level of legitimacy. For most POs their identity is unchanged as a result of the BWCs.

7.1.5 Theme-5: Emotions: learning/attachment/touch-points - effects of BWCs

Learning

As Acuto (2014) points out, Emiratis greatly value learning and learning here is occurring at multiple levels. Learning to be part of and subsequently recreate an occupational culture (CI/KP/11); technical learning about BWC batteries, remembering to wear, how to point (Majid KPS, Theme-4); learning new roles, relationships and responsibilities as evidence gathering and analysis processes emerge; learning by key Senior Managers from and with technology suppliers or international Police Forces;

learning as Nader does (section 5.3.5) how to use BWC footage in training; learning how to present oneself in recordings (Saeed, APS, Theme-2); and the strategic learning by Senior Managers on how to use BWC data to lock-in continuous improvement. Previous research does not focus in the same way as this research on learning, making comparisons difficult; most previous studies taking the citizens' perspective.

Emotions

Whereas Piagetian learning psychology presumes an isolated cognitive individual and behavioural learning psychology denies consciousness, for Vygotsky learning individuals are both cognitive and emotional beings. Learning brings emotional attachment and unlearning to switch ways-of-working requires an emotion re-attachment from previous roles, relationships and responsibilities. This is especially important in emotionally charged work such as policing. Researchers such as Prenzler (1997) suggest POs can live an inner-life dissonant from external persona, however Charman and Corcoran's (2015) work on reproducing police occupational cultures suggests that aligning emotional state with occupational culture is important for a sustainable culture.

Previous research rarely takes the PO's perspective and therefore has little to say about PO emotions. A close reading of the Macpherson Report (1999) The Stephen Lawrence Inquiry reveals how emotions affected every key point in the narrative: from the hatred of the murders, to the fear of POs and misplaced loyalty. Them-vs-us is an emotional group-think response to perceived emotional rejection and institutional racism is grounded on individuals finding emotionally-justified discrimination acceptable. POs in Abu Dhabi respond to BWCs emotionally and have to make sense of their emotions in the context of the Police organisation and wider social culture. Police Officers express fear (O.10.11) of getting into trouble; act from trust in their partners (CI/8.1), use BWCs to reduce stress (CI/12), act from commitment and seek reassurance (APS Theme-5) and express overall attachment to their ways-of-working (S/KP/45). In the machismo culture discussed in the Ferguson aftermath (Culhane and Schweitzer 2017) expressing emotion other than loyalty to a failing occupational culture was akin to weakness. It is profoundly healthy that POs in Abu Dhabi express emotions as a result of using BWCs, since it is an essential step in self-reflection, subsequent learning and over time renewal of a socially acceptable occupational culture.

In summary, learning and emotional reattachment are important results of BWC usage; later sections return to this important theme to explain ‘how’ and ‘why’ POs in Abu Dhabi adopted particular interpretations of the BWCs.

7.1.6 Theme-6: Practice shaping interpretation - effects of BWCs

Technology is never an accepted artefact or conglomeration of processes, instead as Castells (1997) argues, its meaning and value are provisional, renegotiated and always shaped by culture and context and therefore disputed. This is especially so for technological transfer across borders, such as the BWC, where Sen’s (1999) questions (what capability does the technology give me, what is its value, what can I do with it) can never simply relate to knowledge embedded in an artefact, since usage and meaning vary. Most famously, Shapin and Schaffer (1985) record the dispute between Thomas Hobbes and Boyle over the meaning of vacuum, experiment and air pressure. Technologies are enacted; they are used for a purpose (perhaps not their intended purpose) and used in an ecosystem (section-3.6.3; Arthur 2010) where changes to one variable have ripple effects on other variables creating new paradigms. While the BWC was introduced by the UAE Government to keep pace with policing technology in major cities, its use in practice as we have seen poses dilemmas and in solving one issue, gives rise to others.

In summary, from the PO’s viewpoint, the dominant interpretations of BWCs include the six points summarised from the above discussion in figure-7.1. While each of these interpretations can be found in previous research, which are more fully discussed in answering research question-2 below), no interpretation in Abu Dhabi refers to altering a (them-vs-us) occupational culture or restoring police legitimacy: the main interpretations given by US innovators (see Hedberg *et al* (2016; Katz *et al* 2015; White 2014).

Effect-1	Technical problems (see section 6.5.1)	Batteries, low light, recording angle, forgetting to wear, forgetting to inform citizens, one PO only recording
Effect-2	Social interaction	Citizen complaints reduced where BWC evidences ‘good’ police behaviour
Effect-3	Behaviour: altering PO and citizen behaviour:	PO and citizen behaviour improving, some formalising of police behaviour
Effect-4	Occupational culture	Strengthening – citizen, SO acceptable recording partners and colleagues

Effect-5	Power: empowering Senior Managers	variously: ‘spy,’ discipline, make new rules, monitor
Effect-6	Knowledge: behaviour evidence base	Evidence base now exists for use in (a) training new POs, (b) eradicating SOP non-compliance and (c) creating new SOPs: overall evidence base to drive continuous improvement.

Figure-7.1: Summary of BWC effects in Abu Dhabi arising from use

7.1.7 Theme-7: Social culture: Islamic/Arab effects of BWCs

All grounded research is in a sense parochial, though comparative research overcomes this by contrasting alternative meanings and interpretations. Research is ethnocentric when the suggestion is that results and meanings from one cultural setting are without recontextualisation universally applicable; the assumption of exceptionalism or superiority Hammerich and Lewis (2016) criticise in cross-cultural management studies. Throughout this thesis, attention has been called to the ethnocentricity of US and UK studies, based as they are around illegitimate policing, often characterised by occupational cultures at odds with important social groups such as racial minorities. There are no previous studies of BWCs in an Arab and Islamic setting and therefore possible to reject earlier research as having any relevance. This too would be a mistake since a key point is to identify what difference culture and context makes to BWCs: one of the major themes resulting from data coding. Figure-7.2 illustrates the most important cultural contextual characteristics referenced in this research.

Islamic and Arab cultural factors		UAE context	
Women and Guardianship	Guardianship by family from strangers and dangers	UAE rapidly developing economy and society	Already developed level standard of living
Images	Un-Islamic images unacceptable: undress or immodest conduct	International and located between Asia and Europe	Migrant labour and international market/socio-cultural connectivity
Family and privacy	Home and family sacrosanct from outside contact without permission	UAE is small and open society	Physically and socially small – family, clan and personal honour remain important
Spying prohibited	Section-5.3.7: Public Prosecutor cites Qu’ran <i>And do not spy or backbite each other</i>	Modernising economy:	Technophile

Figure-7.2: Summary of UAE context and cultural characteristics influencing BWC use

Figure-7.2 represents two important differences from previous research on BWCs. Firstly, unlike previous research it highlights the importance of culture and context to usage patterns. Secondly, even where previous research refers to wider culture and context, these are not made explicit, indeed, some of the US research suggests that its culture and context make it universally applicable. Use patterns of BWC by Abu Dhabi police relating to women and homes cannot be understood without detailed reference to the Islamic culture. Non-crime interactions with citizens, including the 83% migrant population cannot be understood without closely referencing UAE context.

7.1.8 Answer: RQ-1: What effects does the introduction of body worn cameras have on police officers in Abu Dhabi?

In summary, with an already low crime rate, the use of BWCs has not affected P2C interactions being mainly non-crime. PO behaviour towards citizens has improved in the sense of politeness, though where it has become more formal, Senior Officers and not citizens perhaps consider this an improvement. Citizen behaviour towards POs has also improved. Improved behaviour has altered the perception of POs – that they now have a defence against unfounded complaints. Senior officers perceive they can more readily answer complaints. Complaints by citizens are perceived to be falling. These effects of BWCs in relation to complains appear similar to elsewhere, however, complaints are a surrogate for good P2C relations, US and UK research too shows declining complaints, however in their cases, this does may not reflect improved P2C relations, simply distrust of the complaints system and continued poor relations. In UAE's case, declining complaints reflect an improvement in already good P2C relations.

Technology transfers can result in significant changes to local culture: the so-called *McDonaldization* effect (convergence around dominant culture). There is no evidence of this arising from BWC usage in Abu Dhabi. Privacy boundaries are differently drawn in its Islamic culture (home entry, home recording, women recording), these cultural proclivities so far remain intact following the introduction of the BWC.

UAE's police occupational culture is not characterised by the them-vs-us typifying US and some UK police forces, around issues of race (and to a degree sexuality, gender

and class). Note that research in some areas of the UK, for example the Isle of White, by Ellis *et al* (2017) finds a high police approval rating and no evidence of an us-versus-them culture. BWCs were introduced in the US and UK in part to help alter the police occupational culture, though as Mears *et al* (2017) points out, that social aim has not been achieved, and could not expect to be as the result of a simply technological innovation. UAE's aim was to symbolise modernisation of policing relative to major cities and improve policing processes, not to alter the occupational culture. UAE police's occupational culture is thus far strengthened by the BWCs since Islamic values continue to be respected, footage to improve behaviour and SOP compliance is being used in police training and bonding with partners appears unaffected. Overall, in a society where *security by surveillance* is accepted, BWC have aligned with police occupational culture, given senior officers the opportunity to ensure SOP compliance and improved police relations with citizens.

BWCs are part of a stream of technology (ratios, GPS, in-car video) allowing remote Senior Officers to track and monitor POs activities when autonomously operating away from Police Stations. Police hierarchies remain tall and unaffected by the technologies except (a) new technological sections are growing (IT, Security, Visualisation); (b) middle managers such as Station or Patrol Lieutenants have lost the ability to review BWC footage, which is now reserved for Senior Managers, (c) Senior Managers now have the power to review what where previously autonomous actions and decisions by patrolling POs and where necessary create new rules and oblige compliance with existing SOPs using discipline or counselling and (d) use footage to demonstrate acceptable behaviour in training future POs. In summary, BWCs are centralising power to Senior Managers, and reducing PO autonomy where SOP compliance waived. Senior Managers are able to use BWCs to create and monitor behaviour standards more directly than previously, not possible where POs refuse to wear the cameras, as Pagliarella (2016) notes.

Changes to policing processes are emerging as a result of BWC usage. Internal procedural justice is increasing, but unlike empirical research elsewhere suggests (such as by Essex Police), external justice in the sense of increased 'criming' is not occurring, since UAE crime is already at such a low level. Senior officer accountabilities are simplified as a result of BWCs, since they now have a new evidence base, whereas

patrol POs accountabilities are now more complicated, for those POs not complying with SOPs. Research elsewhere such as by Wasserman (2014) and Culhane *et al* (2016) interprets BWCs as a failed attempt to create or restore police legitimacy. In UAE issues of policing legitimacy are perhaps less contentious than in the US or UK, or at least there are no public demonstrations or debates indicating widespread disapproval; as an addition to *security by surveillance*, BWCs only add to an already strongly perceived legitimacy. (Ellis *et al* [2017] find an 82% public approval of BWCs in policing from a major survey in the UK). It is worth noting that these remarks relate to the 20% of the population who being Emiratis are guaranteed rights under the constitution, whereas short-term migrants enjoy only guest status; as such it would be difficult for migrants to express criticism of the police, even if they felt it justified. PO identities in UAE collectively constitute a police occupational culture binding partners and which is socially acceptable. Research in the US, such as Ready and Young (2015) suggests that police occupational culture is them-vs-us and creates individual POs acting in a socially unacceptable manner. BWCs have not disrupted the police occupational culture in Abu Dhabi, indeed by improving P2C citizens, the policing culture (already socially acceptable) is strengthened.

7.2 RQ-2: How do police Officers, working in the occupational culture of Abu Dhabi Police interpret the introduction of body worn cameras?

Six items shown in figure-7.1 summarise the effects of introducing BWCs into Abu Dhabi policing. This section considers by what processes POs create interpretations of these use patterns? Upon answering this question, the following section considers why particular interpretations were adopted and others rejected. Two difficulties arise in answering the question. Firstly, how someone interprets can be considered a question of individual psychology and in some senses interpretations begin and end with individual cognitions (conscious or not). However, as section-3.7 argues and figure-3.4 illustrates, the Vygotskian socio-cultural approach adopted here insists that all learning (interpretation is learning) involves individual enactments, emotional reattachments and sense-making referencing a particular work organisation (and occupational culture) and specific meanings and predispositions constituting an ambient culture and context. This section therefore uses Vygotsky's framework (see

Engeström 1999) to analyse how POs interpret the BWCs, with the variables in figure-3.4 giving structure to the analysis: individual learning, organisation influence, context influence, culture influence and finally the socio-cultural learning processes explaining how interpretation emerge clashing identities, work practices with old and new ideas and interpretations.

The second difficulty answering the research question is that as sections above explain, little previous research examines BWCs of other police technological innovations from the PO's perspective and none from a learning perspective. This makes comparison and contribution to a focused body of knowledge difficult. Instead, this section references where previous research on BWCs or changing police occupational cultures alludes to learning and interpretation and suggests how useful an explicit learning framework is for understanding how POs interpret BWCs in particular and technological change in general. A further complication is the Arab/Islamic culture and context of Abu Dhabi. The section argues that without explicitly fore-grounding culture and context investigations of how policing technologies are interpreted or occupational cultures changes are of limited value.

7.2.1 The individual police officer using and interpreting BWCs

Most of the research on BWC adopts a positivist stance, seeking to explore outcomes and formed attitudes (Culhane *et al* 2016; Ellis *et al* 2017; and Headley *et al* 2017) are examples, asking what interpretations not how the interpretations were arrived at. The two researchers closest to my project are Owens *et al* (2014) study in Essex, UK and Sandhu's (2017) study in Edmonton, Canada. Owens *et al* uses a randomised trial method, including fifteen interviews, finding that POs using BWCs become more formal and press more charges, with 50% of POs saying the BWC gives them more confidence, especially in incidents that involve violence or are highly emotionally charged. Their focus is on incident outcomes, so comments on how POs make interpretations of BWCs are a by-product of their research, which concludes that BWCs (2014:17) make POs *more mindful of their behaviour* and averse to inaction. Extensive research amongst UK POs by Ellis *et al* (2017) reveals a high approval rate amongst Hampshire POs a finding similar to that in this research.

Sandhu's (2017) research, like this research, takes the PO's perspective, in the aftermath of the taser killing of Robert Dziekanski by the Royal Canadian Mounted Police, which bystanders recorded and instigated wide public debate on BWCs. Observations and interviews with 60 POs revealed an us-vs-them atmosphere, where defensively the POs saw BWCs as justifying their actions (though not the perjury for which one was found guilty). POs expressed fear that their actions are misinterpreted, especially when using physical force, with a small number preferring to remain camera-shy. Overall, POs favoured BWCs though primarily (2017:12) when *footage is favourable to them*.

Figure-7.3 summarises the results of other research showing its relevance to individual POs interpreting the listed effects of BWCs.

Effect number	Effects of BWC	Previous research comments on how individual POs interpret effects
Effect-1	Technical problems (see section 6.5.1)	<ul style="list-style-type: none"> • Jennings (2015) BWCs part of remote monitoring technology set • Katz (2015) familiarity irons out technical issues and increases PO approval of BWCs
Effect-2	Social interaction	<ul style="list-style-type: none"> • Owens <i>et al</i> (2014) more confident when incidents highly emotional or violence involved
Effect-3	Behaviour: altering PO and citizen behaviour:	<ul style="list-style-type: none"> • Owens (2014) BWC reduce arrests, citizen behaviour improves • Smykla (2015) police behaviour improves with BWCs • Jennings (2015) POs improve behaviour • Headley <i>et al</i> (2017) approval declines as partner actions recorded • Sandhu's (2017) minority of POs camera shy • Owens <i>et al</i> (2014) POs averse to inaction • Sandhu (2017) <i>footage favourable to them</i>
Effect-4	Occupational culture	<ul style="list-style-type: none"> • Kyle (2016) individual POs approve of BWCs
Effect-5	Power: empowering Senior Managers	<ul style="list-style-type: none"> • Headley <i>et al</i> (2017) Senior Officers (and women) most approve of BWCs
Effect-6	Knowledge: behaviour evidence base	<ul style="list-style-type: none"> • No previous comment

Figure-7.3: Summary of previous research comments on how individual POs interpret effects of BWCs by list of effects in Abu Dhabi

Individual POs appear to be accepting of BWCs and other data-capturing technologies (Effect-1), with implementation 'technical' issues readily being ironed-out; this qualitative data from Abu Dhabi supports these findings, though no definitive causal linkage is proven since this is beyond the methodological remit or approach.

Effect-2 suggests POs value an evidence trail in circumstances in which they are uncomfortable. In Abu Dhabi this is also the case, for example in the industrial dispute observed (Tariq in 5.3.1). However, the additional evidence is not available in circumstances (in homes, immodest women, women in homes) where individual POs would feel even more uncomfortable breaching Islamic values (and instructions from Seniors). For effect-2 then, Sandhu's findings are not confirmed, with culture trumping the individual inclinations of POs.

Previous research around effect-3 suggests individual PO behaviour improves with BWCs (for example Ellis *et al* 2017) – a finding confirmed in Abu Dhabi. Headley *et al*'s (2017) finding, that approval of BWCs declines when or if footage is used to discipline partners, is not supported by the Abu Dhabi data, suggesting that occupational culture is weaker than commitment to procedural justice. There are some POs in Abu Dhabi, as Sandhu finds in Edmonton, who are camera-shy or wary of the image they portray on partner's recordings.

Effects-4 is best considered below, noting here that previous research suggests that the majority of POs support the introduction of BWCs, a finding partially confirmed by the Abu Dhabi research taking into consideration, however that this is not representative statistically.

Effect-5 from BWC usage in Abu Dhabi is not considered in detail by either Owens *et al* (2014) or Sandhu (2017) illustrating the limits of not locating a unit of analysis in a wider context. Headley's (2017) finding that Senior Officers and women POs show most support for BWCs is not supported in Abu Dhabi where POs across the board show support, with the possible exception of some middle managers in Police Stations. This is also the conclusion reached in Ellis *et al* (2017).

Finally, effect-6, the accumulation and use of knowledge of PO autonomous activities is not commented upon by previous researchers; in Abu Dhabi using knowledge to improve training, SOP compliance and rule-making are arguably important results with immediate impact on the work of individual Senior Officers and longer-term impact on individual POs, some of whom show awareness of the issue.

By what processes then do POs in Abu Dhabi create interpretations of BWC use patterns? My research findings agree with those above suggesting that feeling protected against complaints is important and for this reason some POs support the introduction of BWCs. As a result of BWCs, PO behaviour has the capacity to improve and this research again endorses previous research that this interpretation of effects is valid. On two important points about individual PO interpretations of BWC effects this research differs from previous research. Firstly, individual POs in Abu Dhabi view Islamic prohibitions as dominant, to all other considerations; these prohibitions relate to entering and recording homes and recording women (especially those acting immodestly). The individual PO's *logic of practice* is strictly demarcated by these wider cultural influences. Secondly, knowledge cumulated from BWC practice is actively used by Seniors in Abu Dhabi to ensure SOP compliance, train and make new rules. Senior Officers view this knowledge accumulation as an opportunity to standardise and raise standards. Individual POs recognise this trajectory and none object, since each expects modernisation and continuous improvement. Previous research has not mentioned this interpretation by individual POs and it is a new contribution from this research.

7.2.2 Individual POs interpreting BWCs in the Abu Dhabi police organisation occupational culture

Bourdieu (1971) pointed out that 'enstructured' cultures emerge with patterns of habituated thinking and enactments giving order to our lives and when shared, commonality with others, he terms this (1990) the *logic of practice*. The term is also used by Giddens (1984) in association with his idea that active agency influenced by and in turn influencing social structures (what he terms structuration), an approach close to the active agency of Archer (1988; 2007), see section 2.7 above. At any moment in time, individual PO's interpretations of BWCs are influenced by the prevailing ideas in the police organisation, to which they belong,

Figure-7.4 summarises the results of previous research relevant to interpreting BWCs from inside Abu Dhabi's police organisation and in particular its occupational culture for policing.

Effect-1 is little commented upon in previous research, yet important. Sultan, (section 5.3.8, Theme-3), records the decision to introduce BWCs in Abu Dhabi was taken outside of the Police (by the Government) and intermittent introduction resulted from detailed discussions by the Police to modify BWC technology, processes which are ongoing to improve the technology. In short, important decisions on the type of technology are taken at organisational level, without consultation with POs and these continue, though current discussion are informed by feedback from PO usage.

Effect-2 in previous research focuses on the illegitimacy of the police and in Monahan's (2006) case citizens responding by recording police behaviour; there is no evidence of this behaviour in UAE in the current study. In the case of Abu Dhabi where policing is legitimate, whilst acknowledging the caveats previously discussed (and successful judging by the low crime rate) these are not major concerns and POs do not interpret BWCs in terms of legitimacy except from the generic viewpoint of being modern and comparing with forces in other major cities such as London, Edmonton and Missouri.

Effect number	Effects of BWC	Previous research comments on how Police Organisation influences POs interpretations of BWC effects found in Abu Dhabi
Effect-1	Technical problems (see section 6.5.1)	<ul style="list-style-type: none"> • Few comments • Maguire (2003) tall hierarchies less efficient
Effect-2	Social interaction	<ul style="list-style-type: none"> • Monahan (2006) BWC encourages counter-surveillance of POs by citizens Illegitimacy
Effect-3	Behaviour: altering PO and citizen behaviour:	<ul style="list-style-type: none"> • Ariel <i>et al</i> (2016) reduced complaints because of changed police behaviour • AXON says BWCs reduce complaints for all organisations • Sandhu (2017) POs believe BWCs reduce complaints • ODS Consulting (2011) BWCs reduce citizen complaints • Owens (2014) BWCs gather useful evidence • Ellis <i>et al</i> (2017) 82% public approval of police BWC use • Ready and Young (2015) reduced arrests • Hedberg (2016) reduced arrests • Morrow (2016) BWCs formalise, increase arrests • Brown (2015) POs more careful in exercise physical force • Rosenfeld (2016) PO reluctance to enforce law because recorded
Effect-4	Occupational culture	<ul style="list-style-type: none"> • White 2014; Ford (2015); Katz <i>et al</i> 2015; Gaub <i>et al</i> 2016; Hedberg <i>et al</i> (2016; Morrow <i>et al</i> 2016) all say occupational culture the problem and BWCs will not alter it • Young and Ready (2016) some occupational culture reducing BWC wearing rate to 50%
Effect-5	Power: empowering Senior Managers	Brucato (2015) BWCs allow Seniors to dismiss complaints by referring to objective evidence

Effect-6	Knowledge: behaviour evidence base	No comments
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Figure-7.4: Summary of previous research comments on how Police Organisation influences individual POs interpretations of the BWC effects found in Abu Dhabi

We have noted above PO's perception that BWCs reduce complaints (effect-3), this view is shared, previous research suggests by Police Organisations, who spend considerable time managing complaints and can increase legitimacy by reducing them and diverting resources from complaints to areas of services the general public value. Abu Dhabi POs do not interpret BWCs from the viewpoint of increasing or decreasing arrests. Some suggest BWCs make them behave more formally. POs everywhere are sensitive about using physical force and previous research suggests that BWCs increase this sensitivity. Again, this is not a major issue in Abu Dhabi, except for SSC where team working and shared decision-taking are enhanced by BWCs.

Technological solutions rarely resolve social problems. A plethora of research ascribes socially unacceptable police behaviour to occupational culture and all finds that BWCs do not alter the culture (effect-4). In Abu Dhabi occupational culture is also a lens through which BWCs are interpreted, in this case an occupational culture aligned with procedural and outcome justice. In the absence of an occupational culture discriminating against sections of the population, BWCs were not introduced in order to alter the occupational culture; on the contrary, the occupational culture in Abu Dhabi welcomes the BWCs.

POs interpreting BWC from inside the Abu Dhabi police organisation, view their organisation as modernising and internationally comparable (section 5.3.8). They therefore expect it to adopt modern technologies, as do the public for whom security through surveillance is an accepted value. Previous research's conclusions in relation to BWCs may be distorted by the fact that the two sites of most research (UK and US) have both been criticised for them-vs-us occupational cultures in policing and BWCs judged by its impact in altering occupational culture. In Abu Dhabi, the BWC is judged from inside an organisation with a non-conflictual occupational culture and another technological innovation befitting a modern police organisation.

7.2.3 Learning and interpreting BWCs in an Abu Dhabi context

From a socio-cultural perspective, as Engeström (1999) says, *context is everything*: meanings only have meaning when shared socially and reflecting social understanding. In noting UAE's rapid socio-economic progress, Davidson (2009) makes the point that one consequence is a low crime rate. Criminological research disputes relationships between poverty and crime or types of crime (Sheptycki 2004), undoubtedly, as in the UAE case the issues are complex and beyond the scope of this research. As a rich country, UAE can afford a well-funded police force equipped with advanced technologies. Low crime and the police force appear mutually reinforcing, providing the positive context Nowacki (2016) suggests offers success to BWCs (effect-2). Also, Brucato (2015) as notes (effect-4) police legitimacy helps policing and in this case the *security by surveillance* value helps further. Individual POs in Abu Dhabi interpret BWCs with expectations of surveillance, modern equipment and public acceptance. Their profession is graduate entry, well paid and esteemed by the Emirati population.

BWCs are discussed in previous research often without referencing context; here Nowacki (2016) is the exception. Much is lost in doing so. Context and habitus engender expectations and perceptions.

7.2.4 Learning and interpreting BWCs in an Abu Dhabi Islamic and Arab culture

In the US culture, media daily reports police racism and gun crimes (sadly often school shootings). In the UK, as previously noted there are 55.5 crimes per 100,000 population per year in London and 48 in Manchester; Abu Dhabi has the lowest city crime rate in the world at 15. Abu Dhabi's culture as a law-abiding Muslim country is one where tourists or migrants commit the majority of crime, not Emiratis. In UAE's case the legitimacy of the Police rests in part on the low crime rate (a cultural phenomena) and active interaction with people (street presence, school visits, community participation).

Security through surveillance is a civic valued shared by police and Emirati society. CCTV cameras are ubiquitous in Emirati towns, cities, roads and shopping malls. Emiratis feel comfortable and protected by them (Davidson 2005). Whereas occupational culture predominates in much western research, for Emiratis and POs it is the wider Islamic and Arab culture, which along with police practice creates the police

occupational culture. Ignoring wider culture in western research on BWCs is particularly odd when the focus is often on citizen and accountability and not police practice, as is the case here.

Effect-1 of BWC use (see figure-7.5) is interpreted by Abu Dhabi POs as negatives that need attention and upwards feedback is one by one resolving issues of battery charge, forgetting to wear etc.

Effect number	Effects of BWC	Previous research comments on how culture influences individual POs interpretations of BWC effects found in Abu Dhabi
Effect-1	Technical problems (see section 6.5.1)	Especially occupational cultures
Effect-2	Social interaction	Little comment on P2C non-crime social interaction
Effect-3	Behaviour: altering PO and citizen behaviour:	Wasserman (2014) BWC can help alter occupational culture Culhane <i>et al</i> (2016) WBC do not help alter occupational culture
Effect-4	Occupational culture	Viewed as predominating over wider culture
Effect-5	Power: empowering Senior Managers	Goldsmith (2010) policing the police
Effect-6	Knowledge: behaviour evidence base	Little comment

Figure-7.5: Summary of Previous research comments on how culture influence individual POs interpretations of BWC effects in Abu Dhabi

Effect-2 from a PO's viewpoint interpreting BWCs and referencing Emirati culture relates to their non-crime interactions with a wide range of social groups, giving legitimacy to the police and affinity from the population. Note, many of these interactions are not simply with Emiratis: children in school are from a large range of ethnicities, and nationalities, tenants of landlords mixed ethnicity and participants in industrial disputes.

US and UK research shows that occupational culture is neither created by BWC, however, it can determine how POs interpret: as instruments in a them-vs-us battle. Effect-3, then from an Abu Dhabi perspective is a citizen-oriented, positively received socially occupational culture interpreting a new instrument as a positive addition; especially so given *security through surveillance*.

Policing the police (Goldsmith 2010) draws attention to interpreting BWCs as an opportunity for Senior Managers to monitor and eradicate non-SOP behaviour. Shooting unarmed civilians, systematic racist use of stop and search and institutional racism (Ferguson, McPherson) are not deviations from standard operating procedures (SOPs), rather they subvert SOPs and will not be addressed by BWCs. In Abu Dhabi, junior POs compliant with SOPs are likely to approve of their colleagues being pressed to conform by Senior Officers (effect-5) and to applaud accumulating knowledge in the service of continuous improvement (effect-6).

In summary, while western researchers into BWC focus on occupational culture, in Abu Dhabi occupational culture is viewed as a creature of the wider Islamic and Arab culture. This culture influences the extraordinarily low crime rate, acceptance of *security through surveillance* by citizens, P2C social interactions and the positive interpretation of BWCs by POs. Islamic and Arab cultures are the lens through which Abu Dhabi POs view BWCs.

7.2.5 Abu Dhabi police interpreting BWCs: answer to research question-2: *How do police Officers, working in the occupational culture of Abu Dhabi Police interpret the introduction of body worn cameras?*

Section 3.5 explained theoretically, how learning (including interpretation) occurs in a Vygotskian zone of proximal development, featured in the figure-3.4 analytical framework. This section has shown how individual POs re-evaluate their emotional attachments in the light of BWC practice and previous experiences, drawing upon frameworks of thinking drawn from Abu Dhabi's Islamic and Arab culture and context to conclude from logic of practice that BWCs benefit individual POs, the service and wider society.

They do so within the Abu Dhabi police organisation, which is characterised by a police occupational culture quite different from the us-vs-them occupational cultures found in the US and UK where much of the BWC research has been conducted. Absence of a conflictual occupational culture enables POs to see the BWC as benefiting an organisation dedicated to modernisation and keeping pace with policing in the world's most creative cities.

UAE's context of well-resourced police services, a low crime rate and a police force enjoying legitimacy in the eyes of both the indigenous Emirati and migrant population, means POs interpret BWCs as a positive opportunity to improve the service, with SOP compliance and heightening of standards using continuous improvement driven by knowledge accumulated by Senior Officers.

Whereas research in the US and UK focuses on occupational culture with BWC either as an instrument to change occupational culture or its use determined by a discriminatory occupational culture. None of this applies in Abu Dhabi, where the prevailing Islamic and Arab culture significantly influences the police occupational culture and with it a positive view of BWCs adding to *security through surveillance*.

In the ZPD PO bring their work identity and working practice (the six effects of BWC in figure-7.1 and reflect, exchange and distribute ideas interpreting the BWCs test how the new BWC-world feels. They reattach emotionally to the new world, perhaps regretting one or two aspects of its practice, and overwhelmingly interpret the BWC positively.

The short answer to research question-2 is that how Abu Dhabi POs interpret BWCs is primarily by referencing their culture and context. These are not add-ons; they are central to making sense of emerging practice by individual POs working within the Abu Dhabi police organisation. Theoretically, then this section concludes that much of the research on BWCs in the US and UK is using a reverse causality: instead of beginning by examining occupational culture and how BWC are interpreted, an analysis of wider culture and context informs the nature and content of police occupational cultures and from that point interpretations of BWCs make more sense.

7.3 RQ-3: *Why* are these particular interpretations reached and other interpretations discounted?

Answering research question-2 provides a clear picture of how POs in Abu Dhabi have interpreted BWCs; this section asks why these interpretations were reached and why other interpretations were discounted.

7.3.1 Paths not followed

A central point in MacKenzie and Wajcman's (1985) work on social shaping of technology is that emergences or uses of technologies as we know them could always have been different and that in understanding why technologies have become the way they actually, leads us to understand the deeper (perhaps invisible) causes shaping technology. Paul Ricoeur (1984) summarises the importance of constructing narratives interpreting social change saying, *To tell what has happened is to tell why it happened* and later concludes with an emphasis on contextualisation: *To tell what happened, in the context of what did not, is to tell why it happened.* There are always alternative paths; always alternative narrations of why those paths were not chosen. Jon Elster (1978:218)

We must struggle against the tendency to consider the past only from the angle of what is done, unchangeable, and past. We have to reopen the past, to revivify its unaccomplished, cut-offed even slaughtered possibilities. When the historian makes a counterfactual assertion, I submit that it is intended as, and must be analysed as, a statement about what could have happened (for all that we know) to the real past.

The difference between our individual life story, which we may internalise, and collective narratives relating to social events or organisations, as Czarniawska-Joerges (1992) points out, is that these social narratives are tested, negotiated and shared: it is the sharing of narratives about BWCs that is at the heart of answering research question-3. As section 4.8.1 argued the validity of interpretations of BWCs in this research depends on their usefulness, trustworthiness, plausibility: truth here is a social construction the validity of which is in part that it better explains what has happened than alternative explanations and gives an account of why *at the time* alternative interpretations were not adopted.

7.3.2 Ambiguity is only a forward-looking concept

Alternative paths are most difficult to see from the perspective of now. Now is a point without an enactment pattern (Weick 1995), what March and Olsen (1989) term the *logic of appropriateness* and McDuffie (1995) *organisational logic* have yet to crystallise. Now is beset by ambiguity. The 'now' perspective is frightening precisely because alternative futures are unknown. This was the position of the Abu Dhabi POs who at the start of shifts in 2016 were handed a leaflet on BWCs, given a BWC number

and told to switch them on when they arrived at an incident. The POs just did not know what to expect: they faced ambiguity. Referring to Courtney's (1997) matrix (figure-7.6), some POs perhaps (type-1) thought, "Good, similar to in-car video," with others (type-2) thinking, "I wonder if this will be good or bad." Some may have had a type-3 perspective, "Hmmm, I can see a range of good and bad results from this BWC," while the more anxious (or thoughtful) may in type-4 mode have thought "My head is buzzing with how this might work out." The latter groups are celebrated by cognitive therapists, such as Beard and Amir (2010) who use options of ambiguity and their likelihood of being realised to treat anxiety. For Abu Dhabi POs, no therapists were on hand. For most, the only option was *suck it and see*: Dewey's (1939) idea of pragmatic technology – test, experiment, tries things out and a pattern of usefulness or uselessness will emerge. In summary, PO in Abu Dhabi may have begun with ambiguities about the BWC, now they have patterns of practice, negotiated meanings; they can look back and construct interpretations and by referencing practice explain why alternative interpretations were or are rejected. Referring back to the framework in figure 3.4 that has guided this research so far, it is now possible to draw upon the logic of practice and known interpretations to reconstruct the framework.

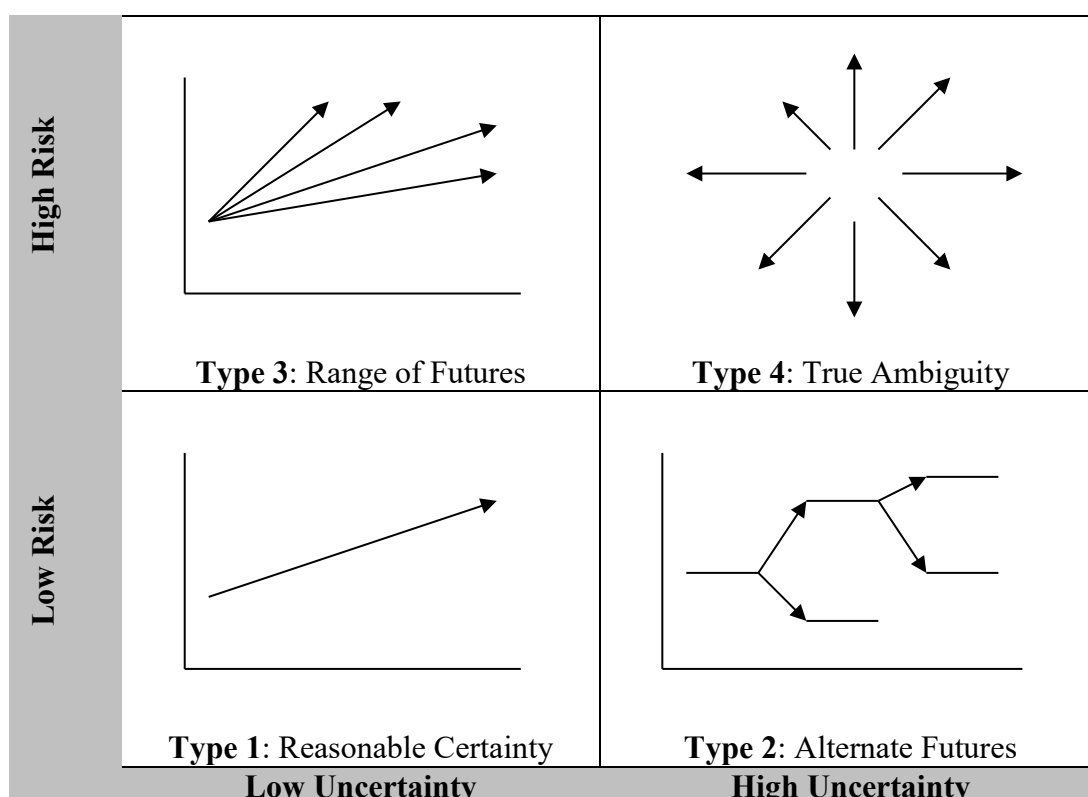


Figure-7.6: Levels of Ambiguity (based on Courtney *et al* 1997)

7.3.3 Framework

Beginning in section 1.5, Charmaz's (2006; 2008) constructed grounded theory has been justified as a research design for this research, noting in section 4.1.4 that having constructed a framework-1 (figure-3.4, section 3.7) to guide data gathering, presentation and analysis, from the analysis a new framework-2 will be created, which will act as a contribution towards theory. This section builds framework-2, based on the logic of practice flowing from the three datasets and uses the new framework as a guide to explaining why particular interpretations of BWCs have crystallised in Abu Dhabi and why alternative interpretations were rejected over the period of practice. In doing so, this research provides a new analytical perspective adding to bodies of knowledge such as criminology, technology studies and social development studies: a new perspective grounded in data from Abu Dhabi police.

Like framework-1, the framework-2 retains the conceptual approach based on Vygotsky (1934), Dewey (1939) and Arthur (2010) justified in section-3.7. Key variables in the framework such as occupational culture, non-linearity and legitimacy from criminology, technology and development studies fields populate the framework. Between framework-1 and framework-2 the key difference is that patterns of practice can now be included as sub-variables since the now ambiguity (now in 2018) is replaced by paths known to have been followed interpreting the BWC as practiced in its actual use and summarised in its effects: figure-7.4 and discussion above on 'what' happened as a result of the BWC introduction and 'how' it was used in practice. Figure-7.7 then revises framework-1 by incorporating known practice results and effects of the BWCs in Abu Dhabi.

Figures 3.4 and 7.7 are intended to be used in the same way as outlined in section 3.7. What has changed between the two figures is a measure of the learning from this research: figure-3.4 encapsulates the position learned from literature and previous research, whereas figure 7.7 adds to this learning from analysis of data – reflections on meanings grounded in Abu Dhabi practice.

For the individual POs learning how to interpret BWCs (from use and how to use them), both frameworks highlight a propensity towards modernisation and the importance of emotions, though in the case of figure-7.7 emotions are sub-divided: firstly, BWCs as

reducing anxiety emotions (stress [parking PO], decisions [SSC] and anxiety [prisons]) and secondly, emotional reattachment to new ways-of-working. The latter is most easily seen: ‘flexibility’, lax compliance with SOPs. Analysis of practice added three variables: firstly, the technical issues dimension (effect-1, figure-7.4) meaning minor issues initially causing negative responses, which however were resolved. Secondly, a technophilic propensity amongst POs to accept new technologies (see effect-1, figure-7.4) and thirdly, what was unknown at introduction – how the BWCs positively improved P2C behaviour.

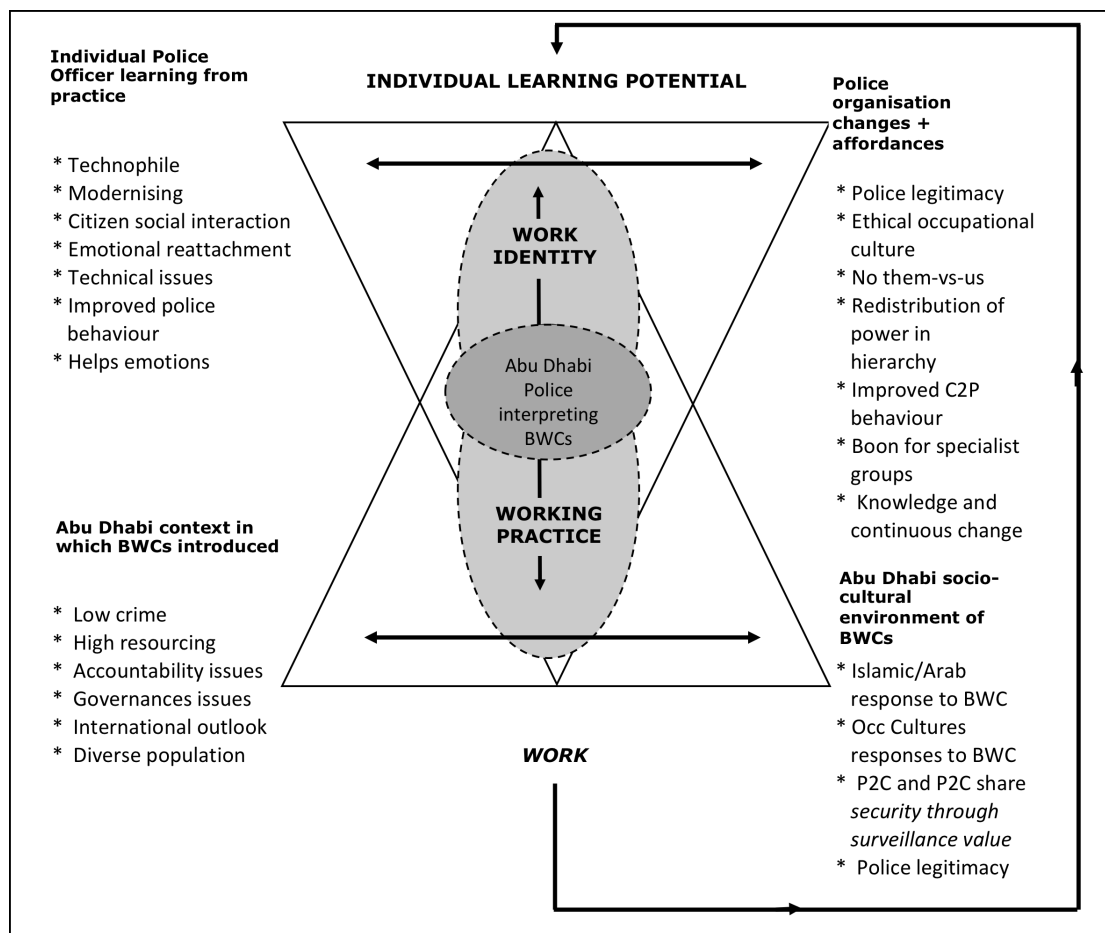


Figure-7.7: Revised framework

Significant changes in variables affecting individual POs from the police organisation are shown in figure-7.7. Power redistribution in hierarchy is retained but unpacked to explicitly include accumulation of knowledge and its use in continuous improvement (see effect-6, figure-7.4). Police legitimacy is now duplicated from culture variables, in this case meaning respect for the organisation, as opposed to the law in part the result of non-crime social interaction (effect-2). C2P improved behaviour is now included

(effect-3). By *ethical occupational culture* is meant one that unlike those cited in the US and UK is non-discriminatory: the organisation is seen to fairly administer justice across the population. Finally, boon for specialist groups, is the unforeseen effect of BWCs on groups of POs (SSC, Prisons, Visualisation) whose practice particularly benefits from BWCs and Senior Managers (effect-5).

Contextual factors in figure-7.7 retain accountability and governances, with public-police interactions now replaced by diverse population, signalling the successful use of BWCs in policing the 83% of the population who are non-Emirati, in addition to Emiratis; this is important since racist discrimination appears absent – a major difference from contexts studied by previous research on BWCs. Two new variables added to context are low crime, now foregrounded given its significance and international outlook, reflecting learning from other Police forces and from technology providers.

Cultural variables remain unchanged with the exception of adding *security through surveillance*, which emerged as influential for both POs and citizens in accepting BWCs alongside other surveillance technologies, with a penetration much higher than the cultural settings in previous research. Meanings of Islamic/Arab culture have altered as a result practice: in this case recording immodest women, or in the home or gaining permission to record in the home. This variable then is both generic (respect the law) and particular (how privacy is interpreted).

Section-7.2.5 explained how in practice the framework helps explain how individual POs interpret BWCs merging experience, previous ideas and attachments with new experiences and meanings to create novel interpretations. As the introduction to this section explains there are always alternative interpretations possible, knowing why a particular interpretation is chosen reveals the social forces influencing interpretation. It is to this explanation that I now turn.

7.3.4 Alternative interpretations

For the great Arabic philosopher Avicenna *reductio ad absurdum* in argument was reserved only for important disputes and always involved establishing boundaries before beginning to avoid never-ending dispute. Here too, of the unlimited alternative

possible interpretations of BWC in Abu Dhabi policing, the seven shown in figure-7.8 are chosen for their relevance to practice, mostly (as Avicenna recommends) they are alternative interpretations favoured by other investigators and therefore capable of contrast and comparison with the lived experience of POs in Abu Dhabi.

Reject

There are many historical examples of technologies being rejected by social groups (digital television in Saudi Arabia, birth control in Africa) including professional groups (Swiss mechanical watch-makers, Europeans initially rejecting Arab steel making techniques).

Alternative interpretations of BWCs by Abu Dhabi Police Officers	Justification for inclusion as alternative
1. Reject (technophile, modernist, society)	An alternative not know elsewhere, however, possible
2. Change occupational cultures problem not culture US and UK:	US and UK evidence suggests that both police occupational culture and wider social culture problematise BWCs
3. Technological determinism	Unforeseen effects of BWCs, such as improvement of SOPs welcomed in Abu Dhabi
4. Legitimacy (C2P) accountability	Legitimacy not an issue in Abu Dhabi
5. CI: efficiency and effectiveness (cost downs, London)	London (2014) suggests cost-downs as a reason for policy-makers to introduce BWCs
6. Negative spying on POs	Taylor <i>et al</i> (2016) suggests US POs reject BWCs because they evidence partner actions
7. Negative spying on society	Are BWC another aspect (like big data) of the surveillance society?

Figure-7.8: List and justification of alternative interpretations

From 2012 onwards, Abu Dhabi POs could have refused to use BWCs claiming (a) threat to jobs, (b) non-Islamic spying and recording, (c) spying on colleagues, (d) they reduce autonomy or (e) an unnecessary cost when crime is so low. Instead, warily for some, they embraced the technology and the figure-7.7 framework explains why. As individuals they are technophile, proud to work in a modernising police force and saw that early technical issues were overcome. As members of Abu Dhabi police, they noticed patterns of improved citizen behaviour, with specialist groups particularly benefiting. Although perhaps wary about future use of accumulated knowledge, no reasonable PO could dispute seniors using BWC data to enforce SOP compliance. POs saw in the practice context BWCs as enhancing accountability by preventing spurious complaints and strengthening their self-esteem as a police force up to international

standards. Perhaps most importantly, far from being anti-Islamic, POs saw patterns of use supporting Islamic values (peace, security, honesty) aligning with *security through surveillance* as a powerful social value. In summary, only a minority of POs mentioned (I/APSKP/5) the reject interpretation, although none acted to reject: reject was disregarded as an interpretation. This illustration of dissent can be interpreted as validating the depth of this study: qualitative data is capturing a range of opinion and not simply seeking confirmatory evidence.

Changing occupational cultures

As researchers in the UK (Owens *et al* 2014) and US (Hedberg *et al* 2017) note BWCs were introduced to help change occupational cultures debilitated by racism and discrimination (Ferguson, McPherson). As Hedberg and others point out these attempts failed. Occupational cultures are deeply rooted and socially referencing. BWCs were not introduced in UAE to alter the police occupational culture nor have they done so. As figure-7.7 shows, individual POs enjoy close non-crime interactions across society, practices to which they are emotionally attached. Abu Dhabi police are legitimate because their occupational culture is perceived to serve the entire population evenly and adheres closely to the wider Islamic and Arab culture. In so far as the low crime context had a problem, it was P2C interactions resulting in poor behaviour or unfounded citizen complaints. Practice shows BWC upholding legitimate complaints while overall PO and citizen behaviour has improved. Without an us-vs-them culture, BWCs were not introduced in Abu Dhabi to solve an occupational culture problem; rather they helped improve an already effective occupational culture.

Technological determinism

This research adopted POs as the unit of analysis seeking to ensure that active agency explains choices; the danger of technological determinism is suggesting that (a) outcomes flow from inputs – innovations are linear and have intended not unintended outcomes, and (b) technology is the important input, knowledge and preferences embedded in the technology are more important than individual or social decisions for creating the results of innovation. From previous research in the US and UK, policy-makers expected deterministic outcomes from BWCs in the form of occupational culture change and less discriminatory patterns of arrests; none of which materialised. Patterns of practice from Abu Dhabi show Senior Officers responding to challenges:

protocols on who and where to record and new systems of monitoring BWC data and its security, as well as a listening ear sorting out technical issues. Most significantly then, the police organisation benefited from knowledge and continuous change and unintended outcome and POs benefited from improved citizen and other PO's behaviour. Figure-7.7 shows these variables interacting. POs with emotional attachment to flexibility or negative emotions from policing are another unforeseen benefit of the BWCs. In short, unlike previous research settings, BWCs were introduced into Abu Dhabi with an open innovation (Chesbrough 2011) outlook and this has resulted in a number of unintended, non-linear benefits; the deterministic interpretation of BWCs elsewhere resulted in failure to achieve success.

Legitimacy

Policing in the US and UK lacks legitimacy in the eyes of sections of the population facing discriminatory policing compared with Abu Dhabi where policing before the BWCs enjoyed (Islamic culture, low crime context, esteemed profession, modernising POs) a high level of legitimacy. BWCs failed to alter legitimacy levels in US and UK because as Hedberg (2017) notes, while some behaviour altered, and some changes occurred in occupational culture, overall discriminatory policing continued: *Black Lives Matter* remains a campaigning force in US society. POs in Abu Dhabi primarily interpreted BWCs as a defence against unfounded complaints. There is no reaction to BWC evidence upholding a complaint since procedural justice is strong in the occupational culture and POs know that overall complaints are down, and citizen behaviour improved. As these patterns emerged PO self-esteem seems to have grown and legitimacy strengthened, though further research with Abu Dhabi citizens will be necessary to substantiate these points. Overall, accountabilities upward, downward and horizontal have been reinforced by BWC because unlike other research setting a positive occupational culture already existed closely aligned with (Islamic/Arabic) social values. In short, the beneficial impact of BWCs appears to be shared by all stakeholders.

Efficiency or effectiveness?

In the case of the London Metropolitan Police one specific aim of introducing BWCs was to reduce PO numbers, saving cost by replacing POs with (lower cost) data analysis in administrative roles. London PO's interpretation of BWCs was undoubtedly

coloured by these goals. In Abu Dhabi POs could have interpreted BWCs similarly, especially so given the low crime rate. At issue here is whether the technology is interpreted as promoting efficiency (lower cost) or effectiveness (improved service delivery). Figure-7.7 shows individual POs as technophile and modernising, unafraid of technological innovation perhaps especially given the *Vision* document's aim of *a safer society, to maintain stability, to reduce crime and contribute to the delivery of justice in a way, which secures and maintains public confidence*. Context assuaged any fears in Abu Dhabi police of emulating the London experience. As practice patterns emerged individual POs saw how standards could improve including police behaviour and the organisation facing improved C2P behaviour with their colleagues in specialist groups particularly benefiting. Abu Dhabi's context is one of high resourcing of *security by surveillance*, unlike London's austerity. POs in Abu Dhabi interpreted BWCs as an opportunity to improve effectiveness not cost-down efficiencies.

Negative spying on POs

One of the complaints against BWC cited in previous research (Culhane and Schweitzer 2017) is eroding the bonding between POs as a result of recording ("spying on") their behaviour: instead of the BWC *is my lawyer* (section 5.3.1, Theme-3); my partner's BWC is a witness for the prosecution. Of course, prosecution is (we hope) reserved for the guilty; in this case those POs not adhering to SOPs, perhaps in serious ways such as corruption. In Abu Dhabi, the *security through surveillance* social value is founded on the premise that the innocent have nothing to fear. No PO complained that colleagues were being obliged by Senior Officers to comply with SOPs since POs know that is part of their job and their legitimacy with society. Non-compliant POs used the coded formulation of wanting flexibility (section 6.3.2) to justify non-compliance. Senior officers expressed the view that some corruption existed and BWCs would help root it out. Previous research found POs articulating the fear of spying on partners as an interpretation of BWCs. In Abu Dhabi, this was mentioned as was how one's own image appeared in partner's recordings, however, as usage patterns evolved, POs came to see these fears as unfounded: only those not complying with SOPs drew the attention of Senior Officers, others at times received counselling about their practices. Individual goals to improve the service (top-left of figure-7.7) without diminishing an already citizen-facing occupational culture led POs to interpret recording partners at incidents as simply improving the service. They did respond to

this issue by selectively switching cameras off, especially when chatting outside of incidents, practices Senior Officers came to accept and understand.

Negative spying on society

Police forces are social constructions, part of society, mirroring social change. Recent wider social interpretations of digital technologies are producing discourse concerned that digital footprints encroach on privacy and in particular allow major companies and agencies to track personal actions profiling individuals with a view to influencing future behaviour in for example purchasing, voting or ‘criming’ (Owens *et al* 2014). Some police and security agencies already use personal profiling adding to social concern. In the conclusions chapter, I return to these issues. Abu Dhabi police could have interpreted BWCs as a further step to an unwelcome digital surveillance society (Fitzpatrick 2010); however, figure-7.7 shows why they did not. As individuals they are technophiles, working in an organisation, whose legitimacy depends upon adopting modern methods, in a context where resources are available and low crime rate valued. Importantly, especially for those who view Islam as technophobic (Al-Rasheed 2007), Abu Dhabi’s Islamic culture values security above surveillance, having established clear privacy boundaries around the home and women.

In summary using a revised framework (framework-2 in figure-7.7) this section has discussed seven alternative interpretations of BWCs referencing PO interpretations found in previous research, largely in the US and UK. The non-deterministic nature of Abu Dhabi POs shows that alternative pathways were possible, however, POs as active agents operating with the specific culture and context (Giddens’ enstructuration) chose the positive interpretations revealed in the answer to research question-2.

7.4 Answer to research question-3

To summarise, following Charmaz’s approach to research design, this chapter has revised the figure-3.4 framework that guided data gathering, presentation and analysis creating a framework-2 by referencing the practice patterns of BWC in use by POs in Abu Dhabi. Using the new framework, from the standpoint of BWCs as interpreted in answer to research question-2 and citing data from research, seven alternative interpretations of BWCs were considered, taken largely from previous research literature. In each case the section showed why the positive interpretations arrived at

by Abu Dhabi PO was reached: citing data evidence and the framework-2. POs as active agents were shown making interpretations operating with Abu Dhabi's specific culture and context. Theoretically, framework-2 is a major contribution of this research to the fields of criminology, technology and development studies as a guide to analysing technology innovation in services such as policing where culture and context strongly shape agent's interpretations. The answer to research question-3 then is that as active agents, Abu Dhabi's POs chose the interpretation of BWCs they did by in learning interactions guided by culture and context based on patterns of practice.

7.5 Chapter summary

Three research questions are answered in this chapter for which a summary of the answers is given below.

RQ-1: What effects does the introduction of body worn cameras have on police officers in Abu Dhabi? Figure 7.1 summarises the effects of BWC on Abu Dhabi POs, noting a range of technical implementation issues requiring resolution, that both PO and citizen behaviour improved and consequently a reduction in complaints about POs. Actual use of the BWC in Abu Dhabi differs from in previous research largely because (a) the police occupational cultures is already strong and citizen-focused, characterised by an absence of them-vs-us mentality and a modernising agenda and (b) a police occupational culture aligned closely with predominant Islamic and Arab values in relation to women and privacy comfortable with *security through surveillance*. BWCs have shifted power from middle managers and POs upwards to Senior officers who exercise the power to monitor previously remote and autonomous PO activities to enforce SOP compliance and raising standards.

RQ-2: How do police officers, working in the occupational culture of Abu Dhabi Police interpret the introduction of body worn cameras? In figure-7.3 the effects of BWC on POs in Abu Dhabi are summarised in relation to previous research in other settings, largely the US and UK. These six effects are then considered in relation to the four framework variables: individual POs, Police organisation, Abu Dhabi context and Abu Dhabi culture. Culture and context are shown to have the most influence on who the BWC is interpreted by Abu Dhabi POs, given their existing high level of legitimacy and culturally-aligned occupational culture. Since culture and context are so important

the section concludes that previous research has been conducted in quite different setting, which bears little relevance in explaining how Abu Dhabi POs interpret BWCs.

RQ-3: Why are these particular interpretations reached and other interpretations discounted? To answer this question framework-1 (figure-3.4) was revised to take account of the actual practice of Abu Dhabi POs using the BWC, creating framework-2 as the finally explanatory conceptual tool from this research. Using framework-2 and citing seven alternative interpretations of BWCs largely drawn from previous research, evidence from practice is assembled to illustrate by alternative interpretations were not drawn, concluding that culture and context were significant.

Each of these answers provides a theoretical contribution from this research, which along with a discussion of the framework value and generalisability follows in the next chapter, which also suggests further research, public policy implications and a publication and impact plan.

CHAPTER-8 CONCLUSIONS AND CONTRIBUTIONS

8.1 Answers to research questions

This section begins with an overview of police occupational culture in Abu Dhabi and its influence of PO's interpretations of BWCs, it then discusses how the *logic of practice* reproduces and alters the occupational culture. It then summarises in turn answers to each of the three research questions.

8.1.1 Abu Dhabi police occupational culture supports body worn cameras

Previous research suggests a significant rejection of the body worn cameras (BWCs), Young and Ready (2016) for example reporting that 50% of POs do not wear it. This appears to relate to occupational culture: firstly, that from an us-versus-them perspective, BWC subvert the previous power balance favouring the police and instead provide objective evidence of actions and decisions. Secondly, as Taylor *et al* (2016) notes, POs in the US are concerned that recording their colleagues may result in disciplinary action against them. Occupational culture is the key issue here since the former objection references the externally facing occupational culture and the second relates to the internal working of occupational culture. Throughout this research has emphasised the different position of the Abu Dhabi police occupational culture: where internally occupational culture features bonding between officers, however this is bonding as partners, not bonding against citizens and Seniors. Abu Dhabi POs accept that Senior Officers will use BWC data to identify and eradicate or reduce non-compliance with operating procedures and standards. Abu Dhabi police occupational culture has been described as citizen facing (Police Vision 2016); POs take pride in the legitimacy of the force and the low crime rate seeing this as positively reflecting the Islamic culture.

Some POs in Abu Dhabi are less enthusiastic about the BWC. From Khalifa Police Station, Jasem, (section-5.3.2) refers to a *double-edged sword*, meaning both his and citizen misdemeanours are recorded – however he goes on to speak of the BWCs overall benefits. Similar formulations are given by Mansour and Saad, also from Khalifa Police. Ali (section-5.3.4) preferred the informality pre-BWC, when he says he used the *spirit of the law*, instead of formal SOPs and Tariq (and.1.2) suggests he now deals more formally with citizens, *talks lawfully*. Apart from POs mentioning the 'technical'

implementation issues, these are the most critical comments from Abu Dhabi Police Officers. To be clear, in 40 interviews, not one single interviewee rejects or is fundamentally critical of the BWCs.

POs are unsympathetic to those POs found not adhering to SOPs. Nawaf's (5.2.1, Theme-3) comments are instructive.

One of my colleagues ordered somebody who was driving a car, when the latter hardly stopped, my colleague insulted him. A complaint was filed against my colleague, and when the officer referred to the camera footage, the complaint was confirmed and the policeman was reprimanded. In the past, and without using cameras regarding such reports, it used to take a long time until being settled. It is clear, this is one of the benefits of using BWC, as in the above-mentioned example, but it should be given to a person who knows how to use it.

Nawaf approves of the speed with which the citizen's complaint was settled against his police partner and speaks of *one of the benefits of using BWC*; suggesting approval of the outcome upholding the citizen's complaint, after *my colleague insulted him*. This captures sharply the difference in occupational culture in Abu Dhabi policing: internally the occupational culture supports outcome and procedural justices, externally there is no us-versus-them and instead an acceptance that procedures and standards should apply; the *civilising effect* of the BWC to which responded Nawaf earlier referred.

8.1.2 Abu Dhabi police occupational culture: its nature, character and reproduction

Whereas Foucault's (1971) governmentality emphasises deliberate actions by a political elite designed to create a culture of acceptance, Bourdieu's (1984) idea of habitus and social capital is less structural; culture arises from habituations cumulating over time, reinforced as useful in social networks, decisions and interpretations. Foucault draws attention to differentials whereas Bourdieu emphasises referential, in this case to what Giddens's terms (1984) the *logic of practice*. The evidence here is of POs who over time and practice have created an occupational culture that suits police practice and in doing so, aligns with wider cultural expectations of policing. Unlike previous research concluding that an us-vs-them occupational culture explains actions and symbolisms internally to the police, which are rejected by sections of the population, here the occupational culture and wider social culture align.

Figure-7.7, the revised analytical framework captures this alignment in illustrating how POs learn to interpret BWCs. Learning, using the Vygotskian framework is essential here, since interpretation is a learning process: cognitive, emotional and experiential. Without a learning process, interpretation becomes a black box, the inside of which eludes investigation. Drawing upon coded data, figure-7.7 details the influences shaping PO learning to interpret BWCs in Abu Dhabi. They do this first and foremost as individuals. Non-cognisant bodies (such as organisations cannot learn or interpret, or only in a metaphoric sense); learning requires cognitive sense-making, emotional attachment, drawing upon memories of experiences and identities, which blended with emergent practices create new interpretations. To the left/top of figure-7.1 influences on individual learners are listed: technophilic, modernising, citizen interaction, reattachment emotionally, technical issues, improved police behaviour and helps (affordances) assisting emotional reattachments. Each of these individual influences is rooted in the empirical data. The individual PO does this sense making from inside an organisation, which itself has a habitus, shown on the right/top of figure-7.7 to include legitimacy, an ethical occupational culture, ability to redistribute power in the hierarchy, improved C2P behaviour, reactions of specialist groups and knowledge usable in continuous change. The habitus of the Police organisation then influences individual PO's interpretations of the BWC. Additionally, individual POs, their occupational culture and professionalism, and the Police organisation are each part of the wider culture and context listed in the bottom half of figure-7.7. Context is characterised by low crime, high resourcing, accountabilities, governances, an international outlook and the diverse population. This context, unlike in the context US and UK researched contexts of BWCs shape PO interpretations positively. In doing so, they are reinforced by and reflect the Arab and Islamic culture in which individuals, occupational culture and police organisation in the UAE operate. The cultural contexts are typified by being law-abiding, accepting security through surveillance and viewing the police as legitimate. Again, PO interpretations of BWCs are shaped and influenced by this culture and its interactions in learning processes with context, police organisation and the individual POs living within its influences. The *logic of practice* in using BWCs results in frameworks of thinking, emotional attitudes and social referencing all supporting the BWCs in ways not found in previous research.

BWCs in Abu Dhabi are not challenging police professionalism; they add to it. They are not reducing the self-esteem or identity of POs, they are strengthening identities as being socially esteemed. Rather than a symbol of ‘us’ being able to monitor ‘them’ POs and citizens alike view BWCs by as symbolising procedural and outcome justice. Whereas US police forces hoped to deconstruct and recreate police occupational culture by using the BWCs, in Abu Dhabi, norms and alignment between wider culture and police occupational culture appear reinforced by the BWCs. Adopting Bourdieu’s habitus perspective and aligning it with Vygotsky’s learning perspective removes analysis away from the psychological intent of individual POs and draws into analysis of wider sociological factors that give a deeper, more plausible explanation of interpretations. BWCs are not re-framing policing in Abu Dhabi, they are aligning with an existing culture of legitimacy; this socially-shaped interpretation of the technology can therefore be grounded in a recognisable social culture and context and not separated from it.

8.1.3 Answers to research questions

Sections 7.1, 7.2 and 7.3 answered the research questions, this section summarises those answers and details what the answers add to the existing bodies of knowledge.

The effects that the introduction of BWCs had on police officers in Abu Dhabi are summarised in figure-7.3. As the answer to this empirical question in section-7.1 shows many of the effects of the BWC are similar to those found in previous research including feelings of protection against citizen complaints and improved P2C and C2P behaviour. There are important differences, however, all centred around the legitimacy of policing in Abu Dhabi and absence of them-vs-us police occupational culture, both of which are found in previous research in the US (Wolfe and Piquero 2011; Brucato 2015; Culhane and Schweitzer 2017) and the UK (Macpherson Report 1999; UK College of Policing 2014), though less so outside of London (Renfrew, Plymouth and Essex). Importantly, Ellis *et al* (2017) find a high (82%) acceptance rate for BWC in Hampshire, England. Other differences emerge: firstly, Abu Dhabi police under pressure from senior officers learn quick to wear and use the BWC enabling and senior officers to be able to use BWC data to create new rules and standards i.e. introduce continuous improvement into the force. Unlike London, cost-cutting is not an effect of

BWCs in the UAE and unlike US cities, altering occupational culture was not an aim of the BWC introduction.

Explaining how POs, in the occupational culture of Abu Dhabi Police interpret the introduction of BWCs faces the difficult that apart from Sandhu's (2017) work in Canada and Owen's (2014) Essex UK study, previous research on BWC mainly addresses quantitative questions and invariably adopts the perspective of citizens and policy-makers and not POs. Additionally, no previous study systematically connects police occupational culture with the wider social culture and context, represented in figure-7.7, they therefore have no clear analytical route for explaining how POs interpret the BWC. The effects shown in figure-7.3 are explained in section-7.2 in terms of the logic of practice, POs learning from patterns of practice.

Why particular interpretations of BWCs are reached and other interpretations discounted is addressed in section-7.3 above the essential point being that as previous research suggests, police occupational culture is important, however, this occupational culture is itself partly created by wider social culture and context and in interpreting BWC references the wider culture and context. Figure-7.7 theorises these processes in a new framework in which interpretation as a learning process occurs by cognitive and emotional individual POs, within the police organisation and with reference to culture and context, without which the nature and power of the occupational culture cannot be deeply understood. Hence the failure detected by Culhane *et al* (2016) to use BWCs as a means of altering the police occupational culture, since isolating political occupational culture from the social forces that shape its creation and use limits understanding.

8.2 Theoretical contribution

Three theoretical contributions from this research are discussed below (see figure-8.1), firstly adding to criminology an approach to and analysis of police occupational cultures not characterised by an us-vs-them perspective. The importance of this contribution is that interpretations of BWCs are significantly different from this perspective. Secondly, in terms of the sociology of technology, the research synthesises sociological research with services and innovation theory, and learning theory to create

a new theoretical framework with which to analyse police technology innovations. Thirdly, adopting the Vygotskian learning framework, the research contributes a new learning frame to sociological perspectives, one in which knowledge (in the form of interpretations of technology) is not a black box, but shows how particular knowledge is learned.

8.2.1 Framework as theory

Section-4.3 justified a research design guided by Charmaz's (2006) constructed grounded theory the essentials of which are to generate new theory grounded in an interpretation of data guided by an initial conceptual framework derived from analysis of literature and subsequently creating a final conceptual framework that incorporates data analysis and highlights contributions to knowledge. Referencing figure-7.7, this research makes contributions to the three bodies of knowledge shown below.

Body of knowledge	Theoretical contribution
Criminology	Occupational cultures (policing)
Sociology of technology	Culture and context social shaping of technology Service innovation and technology non-linear, unpredicted outcomes
Interpretative frames and learning	Bridging socio-cultural and individual - criminology

Figure-8.1: Bodies of knowledge and theoretical contribution from this research

8.2.2 Occupational cultures and criminology

As sophisticated ideas become popularised in their use, they often lose depth of meaning and sharpness of definition. For example, concepts such network, governances and capital can be conceptually inflated to become meaningless. Bourdieu's (1984) idea of social capital and the importance of culture generally from Foucault (1971) is another such idea. Too often as Hammerich Lewis (2016) suggests, culture becomes a black box explanation as though immutably inherited and not itself socially constructed as Archer (2004) insists. Partly because of such usages Chapter-3 rejected the technology acceptance model as an analytical tool. One important aspect of the behavioural turn in economics and technology studies (Arthur 2010) using the idea of ecosystems and complexity is that cultural proclivities are not taken as read and instead require explanation and discussion of their trajectory and reproduction. Reductionist perspectives on the nature of social capital are one reason for its critique by Fine (2002) and other discussed in section 3.1.1.

From Bourdieu's (1984) on habituses, it is a short step to theorising as Shearing and Ericson (1991), Reiner (1992), Waddington (1999) and later Wilcock (2006; 2007) do the notion of occupational cultures characterised by patterns of practice or (Giddens 1984) *logic of practice* and understandings frames issues within a particular occupational discipline.

Early research, often not using the term occupational cultures, but with similar intended meanings used the term functionally; Shearing and Ericson (1991) and Lipsky's (1980) street-level bureaucrats are examples: the danger being social determinism, since functions are static, yet society constantly changes. The idea of occupational cultures as dynamic social creations within occupational cultures group aligns closely with McCoy's (2010) notion of police as a dynamic profession and Torstendahl's (1990) view that by definition, professions are constantly adapting to social and technological change and opportunities.

As section 3.2.3 notes, some usages of occupational culture for analysing police behaviour deploy a deterministic outlook. Prenzler (1997) ascribes ends justifying means as a facet of police culture, when it can only be a sub-culture otherwise policing would enjoy no legitimacy anywhere. Reiner (1992) was an early advocate of using police occupational culture to describe an us-vs-them attitude, disconnecting police occupational culture from wider social mores and legitimacy in the eyes of some social groups. Searching for explanations of the killing of Stephen Lawrence in London, Robert Dziekanski in Edmonton, and Michael Brown in Missouri a wide range of researchers identified occupational culture as the culprit, calling for changes to occupational cultures as preventing repetition, including for some the use of BWCs.

This research has shown that the police respondents did not conceive an us-vs-them dichotomy as evidenced in US and European studies.

8.2.3 Sociology of technology

MacKenzie and Wajcman's (1985) idea that technologies are socially shaped is both simple and complex: simple in that how could social shaping not occur since technologies are created in society for use by society. Complexity comes from seeking

to explain (Engeström's [1999] expansive cycles of learning) how and why social forces shape technology in a particular way and why other paths are not followed. Section-3.6.2 argued that Latour (1988) over-inflates this idea by ascribing agency to inanimate objects; when as Archer (2004) and others insist agency presumes a cognitive ability to make choices. Human agents behave and choose non-rationally (at times, most of the time?), justifying the rejection of Azen's (1985) theory of reasoned action. This reasoning was used (section-4) to justify adopting the PO's perspective on interpretations of BWCs, since it is they who are closest to the *logic of practice* in their use.

This research has synthesised four bodies of theory to explain how technology is socially shaped. Firstly, the social shaping of technology thesis, secondly ideas from service innovation (Normann 2002) that services are experienced subjectively, and their analysis must reference individual qualitative evaluations in addition to more objective (do it work) criteria. Thirdly, from general innovation theory, using ideas from Chesbrough (2011) and others this research posits that innovation processes are open, non-linear and often result in unintended consequences. Finally, Arthur's (2010) ideas of complexity theory, based on the ecosystem metaphor, suggests that innovation environments lack central direction resulting in change to one agent affecting change in others.

The framework, figure-7.4 synthesises work from these bodies of knowledge and the quality of analysis suggests it has the validity of usefulness. In particular, the framework places active agents as the locus for interpreting the BWCs, interacting with organisation, culture, and context; so avoiding suggestions of determinism.

8.2.4 Interpretative frames and learning

To understand the social forces creating and reproducing occupational culture and the social forces involved in the synthesised approach to social shaping of technology, this research has adopted Vygotsky's (1934) learning framework, adapting it as a structure for framework-1 (figure-3.4) and the final theoretical framework-2 (figure-7.7). Vygotsky's socio-cultural learning framework was chosen to structure analytical concepts because of its emphasis on learning (as enacting interpretation) by referencing cultural predispositions found in the occupational culture and wider social culture;

indeed, the thesis argues that understanding interaction between the two is the key to understanding why some interpretations of BWCs are accepted and others rejected. Daniels (2012) convincingly argues for the relevance of Vygotsky's approach in sociology, especially areas of learned behaviour such as culture.

8.2.3 Generalisability

There are three moderations on the degree to which broader inferences can be drawn from this research, which this section considers in turn; they are: (a) theorising from a particular setting, (b) theorising in relation to earlier theories and (c) theorising from the datasets.

Theorising the setting

It was not an aim of this research to construct either a broad new general theory or to limit itself to creating new metaphors or concepts; the aim was to create an intermediate level of social theory, a scheme of associated concepts and causalities in a particular context. This does not mean the theorisation has no relevance to other contexts or is bereft of abstract reasoning and limited only to the observable. Instead, it explains how a social practice – learning and interpreting BWCs in Abu Dhabi – has relevance for how occupational cultures are understood as shaping interpretive behaviour, based on patterns of practice. Taking active individual POs as the unit of analysis avoids reification of either the occupational culture or the police organisation as the principle agent and instead locates the interpreting individuals with Abu Dhabi police and UAE's context and Arab/Islamic culture. In doing so, the interpretations are highly specific, however, the approach to understanding how and why the interpretations occur (summarised in figure-7.7) have more generalised potential usage, becoming what Foucault (1980) termed *conditions of possibility*. Realising this possibility involves understanding the difference to interpretations of BWCs that culture and context make, de-contextualising them and then re-contextualising them into a new target setting. As intermediate theory (Llewelyn 2003), the particular interpretations of BWCs may not be transferable, however, the framework of analysis may be. This is perhaps especially so, since a criticism of previous research is that in deducing interpretations to be a creature of occupational culture, some previous research has decontextualised occupational culture and its relationship to wider social cultures and habituses. Having theorised the particular setting of Abu Dhabi police and the introduction of BWCs it

cannot be expected that the research results are transferable to other cities, however, the approach to the analysis is transferable.

Theorising in relation to earlier theories

Analysis of previous research (section METHOD) is one way of adding validity to research, as Denzin (1970) notes by using the same method, same researcher, approaching the problem using a variety of theories or as in this case comparing and contrasting theoretical results from a variety of research exercises. None of this is to suggest that there is only one correct answer to a set of research questions: different, yet equally valid answers may apply to a variety of contexts, where a suitably robust method has been used in each case. Part of the critique of previous research here, is that focusing on citizens or policy makers as the unit of analysis misses the viewpoint of the POs and neglecting to sufficiently weight the importance of culture and context isolates the influences (such as police occupational culture) upon interpretations of BWCs. Since no previous research on BWCs has occurred in an Arab and Islamic culture and context it is not possible to either check the results of the present research against an earlier set of results, nor to definitively assess how transferable the results are to other Arab/Islamic cultures and contexts. What has been possible is to show the importance of individual learning for interpretative processes and to illustrate how culture and context influence interpretations. In doing so, the research has mounted critiques of earlier research, and also provided a new framework for use in a wide variety of cultures and contexts.

Theorising from the datasets

Reasoning in this analysis has been abductive recognising that the inductive element requires carefully cross-referencing and where possible multiplying evidence sources and considering plausible alternative inferences, in particular reverse causalities. Like all approaches to reasoning, abduction is fallible if used to suggest too wide a validity; avoided here by continual references to culture and context. Previous research (for example London) suggests that a best practice is identifiable. Leaving aside the idea that the 'good' may be the enemy of the 'best' in terms of practice transfer, the particular datasets drawn from Abu Dhabi POs are an obvious brake on generalisability. It would have been possible to reduce such a brake by introducing comparative research, for example in a quite different culture characterised also by a low crime rate, however,

as section-1.4 explains I choose to avoid the introduction of additional variables given the difficulty of ascribing any causality in qualitative social research. In summary, any dataset is accompanied by limitations on generalisability, in this case the limitations are reduced by the internal validity resulting from careful methodological choices and, as argued above, emphasis on the importance of the particular culture and context of the research setting and relationship to previous research.

In summary, the generalisability of this research, its external validity as how POs interpret BWCs, is that the research uses datasets drawn from police officers (not citizens or policy-makers) in an Arab and Islamic context, however, it creates a framework of analysis based on learning in a culture and context which can be widely used.

8.3 Empirical contribution

Empirical findings from this research may be classified under three headings: (a) confirmation of previous research, (b) disputation of previous research and (c) new findings not found in previous research.

Confirmation of previous research on BWC

Like most previous research on BWC, (UK London [2014], Plymouth (Young 2016), Renfrew [Headly *et al* 2017] American Council of Civil Liberties, and Culhane *et al* [2016] being examples, this research find that POs feel BWCs offer protection against unfounded complaints from citizens. Also, like Sandhu (2017) and Jennings *et al* (2015), this research finds that POs and citizens behaviour is deemed to improve as a result of wearing the BWCs; for POs this can mean acting more formally in relation to citizens. POs in Abu Dhabi, as Owns (2014) Essex research suggests, view BWC as an extension of in-car video and static surveillance camera evidence capture.

Disputation of previous research

In some areas that are visible this research contradicts previous research. Sandhu's (2017) work in Canada and Brucato (2015) in the US point with examples to citizens turning BWCs back on POs recording PO activities and Brucato (2015) and others report the concern of POs that BWCs are capturing misdemeanours of partner POs.

Section 7.3.4 records some POs in Abu Dhabi expressing this fear, however, overall there is no evidence or fear of public recording in Abu Dhabi or of recording partners.

Chu (2017) argues that women POs are less intrinsically motivated than male colleagues and Kyle and West's (2017) US research that women POs more strongly support wearing BWCs than men. Neither finding is supported in Abu Dhabi research, noting however, (section 5.3.5) that as women as not normally patrol POs, their use of BWCs is confined to SSC or callouts involving women citizens.

Some of what section 6.1.1 refers to as 'technical' interpretations of BWCs differ. While Abu Dhabi POs initially often forgot to wear the BWCs, as its use continued (Senior Interviews occurring later) this fell away. In the US, Hedberg *et al* (2016) found that long after introduction, 33% of US POs failed to wear the BWC having volunteered for a study rising to 51% in non-volunteers. Such large numbers suggest not forgetting to wear the BWC but instead a refusal to do so and Senior Management unable to enforce compliance. An associated point is raising approval over time of BWC. US evidence is contradictory, Katz (2015) suggests BWC rises but falls says Headley *et al's* (2017) work in Florida suggests it falls. In Abu Dhabi, it seems that peer-pressure improves approval over time, though a minority of POs are resentful.

There is confusion over limitations on recording inside homes in the US; most researchers do not comment and those that do suggest (Hedberg *et al* 2016; Morrow *et al* 2016; Kyle and West 2017 for example) suggest it is at PO's discretion. In the UK, the College of Policing code, like Senior Officer advice and cultural prescriptions in UAE, stipulate that home recording is only with the householder's permission. In the case of Abu Dhabi, POs are unlikely to seek such permission if women are involved immodestly.

London Police (2014) note that BWCs are part of a cost-cutting exercise. This is not commented upon in US or other research and therefore assumed not to be the case, which is similar to Abu Dhabi, where quality improvement not cost-downs are the aim of BWC introduction.

Other areas where empirical data conflicts are less visible and more attitudinal: for example, Hedberg (2016) suggests that PO commitment to procedural justice increases as a result of BWCs disputing Wolfe and Piquero's (2011) finding that lack of legitimacy in the US means procedural justice is unaffected. In Abu Dhabi procedural justice is unaffected by BWCs, having been strong beforehand and part of the legitimacy of the police. Similarly, distributive justice is unaffected in Abu Dhabi, and as Culhane *et al* (2016) and others note also in the US; however, the difference is distorted distributive justice from the viewpoint of minorities in the US, whereas in Abu Dhabi, distributive justice appears strong prior to and after BWC introduction.

The killings of Stephen Lawrence (London), Robert Dziekanski (Edmonton) and Michael Brown (Missouri) sparked public policy reactions to institutional discrimination by police, part of which was the introduction of BWCs seeking to reduce PO autonomy and increase accountability. In none of these cases (Sandhu 2017; Culhane *et al* 2016; London Police 2014) has BWCs had these desired effects, variously analysed as because strong them-vs-us occupational culture resist autonomy reduction and accountability increases. In Abu Dhabi, the BWC was not introduced in response to a crisis, instead to help modernise the force, staying abreast of leading forces. Unsurprisingly, this research finds different outcomes from BWCs: the occupational culture in Abu Dhabi remains strong and aligned with wider social culture and accountabilities (handled by Senior Officers) appear increased, with reported complaints down. Thus, the reasons for introducing the BWC and its results differ in Abu Dhabi from that found elsewhere. Associated with this point, Culhane and Schweitzer (2017) suggest that a *machismo culture* continues to thrive in US policing, since in Abu Dhabi there is no evidence for its existence before or after the BWC, again the empirical findings of this research differ from previous findings.

New findings not found in previous research

The major contribution of this research is to study BWCs in the culture and context of UAE, which has not previously been systematically studied. This is also the first study of police use of BWCs in the middle-east area, though caution is required if generalising UAE results to the wider middle-east, since UAE differs in important cultural and contextual ways from the diverse countries making up the region.

Unsurprisingly, a radically different culture and context to previous research and a PO unit of analysis gives findings not referenced at all in previous research. Sandhu's (2017) research alludes to PO's emotional reaction to BWCs; other research from a PO viewpoint (Owen's 2014) makes no comment. All previous research is silent on PO emotional attachment to policing practices and on interpretation of BWCs being a learning process.

A major finding of this research is the importance of culture and context in explaining why particular interpretations of BWCs are made; it does this by showing how police occupational culture is in part created by and reacts to wider culture and context as a lens through which to interpret BWCs, making the findings of this research quite different from earlier research. Other factors differentiating these empirical findings from previous research are (a) the importance of not recording women and especially women behaving immodestly and (b) the acceptance by citizens of security through surveillance as a cultural trait. These and other effects of BWCs are noted in figure-7.1. Two other areas on which previous research is silent yet appear important in Abu Dhabi are (c) referencing human rights and (d) the idea that Senior Management are using BWC data as evidence justifying rules and standards aimed at continuous improvement of police outcomes.

These areas of empirical findings not referenced in previous research mainly relate to culture and context and are amongst the principle findings of this research.

8.4 Public policy contribution

In this section examines firstly two immediate issues for public policy arising from this research and then considers the wider issue of artificial intelligence and digital profiling as an important future public policy issues.

8.4.1 Public policy now

Policing and the UAE's vision

Published in 2016, UAE's vision for its police work is: *To help ensure that Abu Dhabi remains one of the safest societies in the world, by providing high quality policing services to those who live, work and visit the Emirate*, followed by a mission: *Our purpose is to bring about a safer society, to maintain stability, to reduce crime and*

contribute to the delivery of justice in a way which secures and maintains public confidence (<https://www.adpolice.gov.ae/en/strategic/Pages/vision.aspx>). This aligns closely with the overall Government *Vision 2030* (2008), viewing UAE's potential to join the elite group of sustainably high-income countries based upon a knowledge economy characterised by diversity and diversification from oil-dependency.

UAE has heavily invested oil reserves in fulfilling this vision of a knowledge and cultural hub. Well-known cultural attractions include the Burj Khalifa (the world's tallest building), Sheikh Zayed Mosque, Sharjah Arts Museum, Guggenheim, Louvre. The Dubai Mall, Mall of the Emirates and BurJuman shopping malls set global standards as do some of the universities including the American University, Sharjah, Zayed, Abu Dhabi, and Khalifa. Famously, amongst its hotels are the Palm, Bulgari, Al Diar Capital, Al Ain Palace and Citymax. The point is that visitor attractions are only attractive if security and safety are also guaranteed. Cities such as Barcelona and New York now face difficulties attracting businesses and visitors because of rising crime rates. Emiratis are not content with a crime rate of 15 per 100,000 and ask why it cannot be halved.

Some challenges facing UAE and Abu Dhabi police are similar to elsewhere: drugs, organised crime, people trafficking and money laundering. These points of comparison are apposite: UAE intends to become a globally accepted and successful city and in doing so requires an international recognisable police and maintaining procedural and distributive justice coupled with a low crime rate. BWCs are not the most important contributory factor to achieving these goals, they are however part of the ecosystem.

Corruption in UAE policing

It may alternatively be argued that corruption bedevils UAE policing in the form of misuse of public funds and/or personal gain by POs. UAE's Federal Criminal Law Code of 1987 outlaws public servant's crimes i.e. particular criminal acts and not corruption as a generic category of crime. Manning (2007) and others note that POs as powerful and autonomous street-level bureaucrats have opportunities to act corruptly and Senior Officers in Abu Dhabi eradicating the remnants of corruption as being helped by BWCs (see S/KP/37 and 5.3.8). Prenzler (1997) identifies corruption as being an important factor in the lack of legitimacy facing US police forces. No

evidence of significant corruption was found during this research. Although Senior Officers referred to eradicating remnants of corruption, no single Senior Officers spoke of finding corrupt behaviour, nor did any individual POs refer to corrupt behaviour. Clearly, one cannot conclude from this that UAE police are entirely free from corruption, however what appears is a high level of legitimacy with citizens coupled to (lack of) evidence from this research, suggests a low level, if any, of corruption in UAE policing. Fernando and Jackson (2006) are not alone in highlight the absence of high-level corruption cases against UAE POs, sadly occurring all too often elsewhere.

Continuous improvement

A second important public policy for current implementation relates to the use of BWCs to support continuous improvement in policing standards. Several Senior Officers refer to the use of BWC data in training at the Police Academy and to identify individual counselling needs. A minority of POs reject or strongly criticise the use of BWCs using coded words such as *flexibility* to justify informality (or perhaps previous corrupt activity), see I/APSKP/5 and section-7.3.4. Laggard adopters of any new technology often are emotionally attached to old ways-of-working and/or find unlearning difficult. Their number is nowhere near the 51% not using BWC reported in the US (three of 40 interviewees expressed strong rejectionist views, two being middle rank POs). Rejection does not make these POs poor at their job and continuous improvement should offer special training to those unsure about the benefits perceived by the majority of using BWCs.

8.4.2 Practical recommendations

Extracting significant practical points from this academic research, the purpose of this section is to create a set of best practices to aid the effective use of BWCs in the specific culture and context of UAE. This section is informed by the meshing of the study data with my professional role as a senior police instructor in Sharjah.

Principles behind this best practice guide include the following.

A

- UAE's compliance with the United Nations Charter of Human rights
- Islamic culture
- The integrity of UAE state and policing
- Officer safety
- Ensure efficiency and effective evidence gathering and use
- BWC recording is lawful and beneficial to law-abiding citizens and police officers
- BWC recordings should be evidential in all circumstances; this will require legislation change to UAE court procedures.

B Activation of BWCs

POs should ensure the BWC is worn and switched on in all circumstance where evidence gathering is appropriate including the following.

- Traffic stops, vehicle pursuits, suspicious vehicles,
- Incident callouts, high-risk incidents, verbal or physical confrontation with citizens and stop-and-search incidents
- Consent to search discussion and reading of Miranda rights
- Sobriety or drug tests, statements by relevant individuals
- Seizure of evidence, SSC incidents

Only when an incident is terminated should the PO turn off the BWC or after seeking the permission of the Station Manager.

It is important that officers use the BWC to make an audio recording at incident scenes, in particular the information available when important decisions are taken.

Officers must notify citizens present at incidents that the BWC is recording. A formulation such as this is appropriate. *“To ensure compliance with standard procedures and in order to gather evidence, please note that this BWC is active and recording visual and auditory data at this incident.”* Failure to notify citizens will be considered as a breach of procedures and may invalidate evidence.

Under no circumstances should BWC be operated where officer's privacy should be respected: this include inside vehicles (except in pursuit), locker rooms and canteens.

POs should seek permission before recording in private homes and should avoid recording women displaying un-Islamic behaviour.

In cases of alleged domestic abuse first account evidence can be particularly important. Officers have discretion whether recording is necessary and appropriate.

- C Station Managers should ensure Patrol Officers pickup and wear their own functioning BWCs and that they are returned to the docking station, downloaded and re-charged after patrols.
- D All officers should be suitably trained in the use of BWCs (course code XX). Station Managers should ensure POs take the appropriate training course and that successful completion of training is logged.
- E If an officer believes that a recorded incident may lead to a complaint by a citizen s/he must bring this to the attention of the Station Manager. Evidence suggests that citizen complaints are reduced as a result of BWCs and unjustified complaints more readily dismissed.
- F Authorisation to examine BWC records is strictly limited to the Senior Officer and nominees in the CID Visualisation Section. Viewing and attempting to erase, alter, reuse, modify, destroy, abuse, or tamper BWC recordings is a serious breach of procedures. This includes unintended recordings and recording on the BWC of time and place. Should an officer be the subject of citizen complaint s/he and/or representative has the right to examine relevant BWC evidence.
- G Loss, theft or malfunction of BWCs must be reported immediately via radio or in person to the Station Manager. Officers will not be disciplined as a result of BWCs lost during normal police duties.

- H When completing incident reports, officers will reference BWC evidence, taking care to record date, place, time and partner officer(s). In the case of arrest, completion of incident is at the point at which the suspect is handed over to Station Staff.
- I BWC records will be held by the CID Visualisation Section for a minimum of two years. Under no circumstances will this data be held on Internet accessible servers, transmitted via the Internet or shared in any way with persons not authorised by the Commander-General.
- J Officers seeking to review material from their own or partner's BWC, for example in compiling incident reports, must in the first instance approach the Station Manager, who will transmit the request to the Visualisation Section. This is not a right and should only occur in exceptional circumstances.
- K We recognise that BWC materials can be beneficial used in recruit or professional training and this can occur with the permission of the General-Commander, who will ensure anonymity of police officers in all cases, though in exceptional circumstance and only with the permission of individual officers' identification is permissible.
- L Citizens may seek the permission of the General-Commander to view BWC materials. In normal circumstances permission will not be given unless a serious complaint has been official registered. Under no circumstances will the citizen or his/her representative make copies of the material or remove it from police protection.
- M UAE Police anticipate increasing evidential use of BWC material in our Courts instigated by the Public Prosecutor or defendants. In each case the provisions of (I) above apply. Where a Judge requires the court to view BWC material the permission of the Commander-General will be sought and not reasonably refused.

- N In the event of a charge, upon request the Commander-General will not unreasonably refuse access to materials associated with BWC records, which may include CCTV and in-car video, whether or not, in the opinion of the police the material is relevant to the case.
- O In exception circumstance UAE Police share material with other agencies such as Interpol. Requests for sharing will be considered by the Commander-General and not unreasonably refused.
- P Where the Commander-General considers it appropriate, images from BWC recordings may be shared with the media. In all such cases only, images of potential criminals will be shared, unless for a particular reason images of an individual officer are deemed suitable and the individual officer gives consent.

This best practice checklist is offered as a contribution.

8.4.3 Emerging public policy

A conjuncture of technologies associated with artificial intelligence (AI) pose opportunities and threats for public agencies. All public bodies are data rich possessing individual records of tax, income, health, education, housing, travel, crime, births, deaths, marriages, property and data from static and body worn cameras; and generic data across a wide range, including traffic flows, travel, epidemiology, crime, sales, employment, in addition to social survey results and company filings. Increasingly, big data (BD) is viewed as an asset to be mined i.e. structuring unstructured data, with a view to discerning correlations and even causal linkages. These important points are made in Ellis *et al* (2015). BD is useful and valuable because of rising capabilities and falling costs of data capture, storage, analysis, retrieval and interoperability. To take an example of each: data capture of traffic flows can be captured using low cost blue-tool signalling sensors, stored at negligible cost on home servers or Cloud facilities, classified and analysed using off-the-shelf or custom-made software incorporating algorithms designed to reveal (in this example) road and bridge maintenance cycles, optimal traffic signalling, road pricing, parking charging etc. More sophisticated software supports expert systems that correlate events, such as time, day, and place of crimes. Even more sophisticated systems with machine learning capability are able to

themselves identify patterns and cross-reference or analyse data. This includes voice and facial recognitions (see Katz *et al* 2017). Technology therefore appears near the point where in-car video and BWCs are able from facial or voice data to identify persons of interest to the police or alternatively using predictive patterning identify places/times of social profiles with higher or lower probabilities of crime. This AI technological capability may be static (street, travel point or shopping mall surveillance) or mobile in PO's BWCs, in-car or drone. To oversee developments, UAE has appointed a Minister for Artificial Intelligence (UAE Government 2017).

Opportunities from AI for a technophile Government and police force, such as UAE are obvious: providing POs in real-time with data helping to prevent crime and secure arrests by guiding POs towards criminals allowing police to interrogate a wider digital footprint than at present and perhaps adopt more proactive crime prevention activities. Already, emergency planning scenarios, of which the police are an important part (such as terrorist attacks, major accidents or harmful events) are regularly updated including computerised communications relating to who, does what, where and when. Other non-crime uses of AI for example in epidemiological studies are obvious.

Of course, there may be worrying downsides to such technology, particular if profiling is based on historic data – in the case of the US and UK; data perhaps with embedded racial biases. Another concern is lack of Internet security. Recent events (US elections interference, hacking of CIA and FBI IT systems), suggests that the Security Section are correct in believing that any data transmitted by via the Internet can be accessed by unauthorised agents, for perhaps nefarious purposes. This limits therefore, with today's technology, live streaming of BWC or other sensitive data.

Data capture by BWCs then is increasingly available for analysing using AI techniques. UAE and other police forces and Government will face public policy decisions on how to adopt AI and what use to make of it. Given the cultural acceptability of *security through surveillance*, UAE may not face the privacy issues citizen in many countries are likely to raise, they may, however, face pressure from international policing authorities such as Interpol to adopt the technology and share data.

8.5 Further research

This research is the first to journey into the world of BWCs in Abu Dhabi or any Arab and Muslim majority country and the first to consider in detail police occupational culture in an Arab/Muslim context. Shifting context and culture from previous research conducted mainly in the US and UK, identifies sharp differences in the nature of occupational culture, P2C relations, and relations within the police hierarchy. My research is also one of few (Owens *et al*, 2014 and Kyle and White 2017 being exceptions) to analyse BWCs from a PO perspective; this too reveals considerable differences from research mainly conducted from the citizen or policy-maker perspective. Numerous researchers call for additional research on BWCs, policing technology in general and studies outside the US and UK. This section suggests a wide range of areas in which further research on BWCs and policing technology could fruitfully be done. In particular, of course, I draw attention to further research I may conduct working with Abu Dhabi police and its international networks (see figure-8.2).

Unit of analysis	Research area	Questions illustrating importance
Citizens		
	1. Security through surveillance	How did this culture emerge? Is it distinctively Islamic/Arab?
	2. Consensual policing and migrants	Why are UAE's migrants so accepting of police legitimacy?
Policy-makers		
	3. More technology	What technological trajectory do Policing strategists envisage?
Comparative		
	4. Image of Arab states	Why are Arab states sometimes represented as illiberal when evidence suggests this may be unfounded?
	5. Comparative police occupational culture where legitimacy high	How does the UAE police occupational culture compare with those in other states where police legitimacy is strong?
	6. Comparative police occupational culture where Islam also strong, but context greatly different	Comparative police occupational culture between strong Islamic culture i.e. seeking to separate the influence of culture from context
Policing sociology and management		
	7. Deeper understanding of how and why police occupational cultures reproduce and alter	Longitudinally, how and why will UAE's police occupational culture appear in 2023?
	8. UAE occupational culture same trajectory	How important is the continuous improvement dimension from BWC data to Senior Police Manager?

Figure-8.2: Eight potential areas of further research

Security through surveillance

In two generations Emiratis have evolved from a Bedouin/trader culture into an urbanised society in which private boundaries revolving around home and women support extensive digital monitoring captured in the slogan security-through-surveillance. While there is extensive literature on the surveillance society (Fitzpatrick 2010; Brucato 2015), some recording its approval, there is no research on a whole society (if indeed that is the case) accepting such surveillance. How is this cultural attitude related to the 83% migrant population, how much to bringing the conspicuousness of the village into the city?

Consensual policing and migrants

Policing migrants as Meijers *et al* (1997) shows poses particular issues of legitimacy; confirmed in recent protest action in the French *banlieues*. Policing consensually a society 7/8^{ths} populated by migrants and achieving a low crime rate seems worthy of research attention; yet there is a gap in the research. UAE police believe this social stability is the result of migrants being mainly Muslim and signing contracts stipulating immediate deportation in the event of crime. How does policing a majority differ from policing minorities? Further research may reveal general lessons for inter-cultural policing.

Technological trajectory of policing

This research suggests police in UAE are technophilic and readily accept new technologies into practice, whereas Headley *et al* (2017) note the limited diffusion of BWCs in the US, perhaps due to PO opposition and Jacob *et al* (2016) argue that technology offers opportunities to improve policing. As section 8.4.2 notes, opportunities for additional technological innovations in policing are many and varied. What technological trajectory do Senior Managers and policy-makers envisage? Perhaps one of the police international networks might assist in such a study?

Image of Arab states, specifically the UAE

In some portrayals (Pinto 2012) being an example, low crime and social stability in UAE is the result of authoritarian state actions, reflected in some western media representations of Arab states (Al-Rasheed 2007). Yet, the picture emerging from the evidence in this research is one of consensual policing. Is the illiberal portrayal of Arab

states another example of Occidentalism (Said 1978) or is UAE distinctive amongst Arab states? Further research may only contribute towards answering such questions; however, from the viewpoint of Arab research non-binary portrayals seem long overdue.

Comparative occupational culture

Jennings *et al*'s (2015) careful randomised study in Orlando concludes by calling for internationally comparative research. From the viewpoint of UAE policing, comparison of the occupational culture with other countries where police legitimacy is strong may reveal more about the interaction between wider social cultures and police occupational cultures.

Comparative police occupational cultures

Culture and context have emerged as important explanations for police occupational culture in this research yet given the focus on POs as the unit of analysis, no data was gathered differentiating the influence of context from culture. A comparative study of a strong Islamic non-Arab context contrasted with policing in UAE may help separate context from culture and add insights to the influence of each in creating and sustaining sustainable and legitimate police occupational cultures.

Changing/reproducing police occupational culture

Culhane *et al* (2017) suggests that police occupational culture and legitimacy returned quickly to pre-Ferguson levels after media attention abated. This research suggests considerable alignment between the internal police occupational culture and wider social cultural expectations of policing. A longitudinal study, perhaps covering a five-year period might reveal in detail what social forces within the police and in wider society either reproduce an unchanged or an altered police occupational culture over time.

Police management trajectory and BWCs

Data gathered in this research suggests the Senior Officers intend to deploy knowledge from BWCs to continuously improve police behaviour and inform new rules and standards in a trajectory of continuous improvement. How far will this intention be

realised? A further study in one or two years could comment on whether this trajectory is discernible in practice.

A wide range of possible areas of further research flow from the current research project and as a serving PO situated in the Police Academy, I hope to undertake a programme of action research addressing some or all of the issues above, working I hope with other interested Officers.

8.6 Publication and impact plan

Three years of work should make a difference; here proposals for publications and impact illustrated the planning different this research could make.

8.6.1 Publications

As a PhD funded by the Sharjah government the thesis will inform a report to impact upon practices. The findings will also be published in peer reviewed international journal articles in Arabic and English as well as potentially as a research monograph.

8.6.2 Impact

Figure-8.4 summarises the hoped-for impact of this research indicating the sets of opinion leaders targeted.

Target impact group	Target impact
Present the results of this research to a group of UAE Police Senior Officers	Implications of BWC and associated technologies for continuous improvement of the force
Present the results of this research to a group of UAE Policy Makers	To justify BWC and similar investment in UAE police and its implications for efficiency and effectiveness
Abu Dhabi POs	To prepare a summary poster of the research for display in Police Stations, summarising the beneficial effects for POs of BWCs.
Make a presentation of the research findings to the International Police Federations, Police Association Symposia on Police Best Practice or Blue Planet	Popular literature

Figure-8.4: Research impact plans

Bibliography

- Abdulla J, Djebarni R and Mellahi K, 2010, *Determinants of job satisfaction in the UAE*, Personnel Review, 40:1, 126-146.
- Acuto M, 2014, *Dubai in the Middle*, International Journal of Urban and Regional Research, 38:5, (September), 1732-1748.
- Adams M Fleer M, 2017, *International Transitions: Generating Subjective Sense and Subjective Configuration in Relation to the Development of Identity*, Mind, Culture, and Activity, 14, 27-43.
- Adamson P, 2013, Interpreting Avicenna, CUP, Cambridge.
- Adamson P, 2016, Philosophy in the Islamic World, OUP, Oxford.
- Adler PS and Wingrod TA, 1992, *Usability: Turning Technologies into Tools*, OUP, Oxford.
- Aglietta M, 1979, A Theory of Capitalism Regulation, Verso, London.
- Ajzen I, 1991, *The Theory of Planned Behaviour*, Organisational Behaviour and Human Decision Processes, 50, 179-211.
- Al Kitbi A, 2010, *Youth and Crime: A Field Study*. Sharjah: Police Research Centre.
- Al-Rasheed, M., 2007. *Contesting the Saudi state: Islamic voices from a new generation*. Cambridge: Cambridge University Press.
- Algarni AF, 2013, *Policing internet fraud in Saudi Arabia: expressive gestures or adaptive strategies*. Policing & society. Advance access publication online.
- Ali WB, 2015, *Big data-driven smart policing: big data-based patrol care dispatching*, Journal of Geotechnical and Transportation Engineering, 1:2, 49-52.
- Alpert GP and Smith WC, 1999, *Police Use of Force Data: Where we are and Where We Should Be Going*, Police Quarterly, 2:1, 57-78.
- Amir Q, 2007, *Security Statistics Indications and Comparisons in Sharjah City*, Sharjah: Police Research Centre.
- Anderson B, 1991, Imagined Communities: Reflection on the Origin and Spread of Nationalism, Verso, London.
- Archer M, 1988, Culture and Agency: The Place of Culture in Social Theory, Cambridge University Press, Cambridge.
- Archer M, 2003, Structure, Agency and Internal Conversation, CUP, Cambridge.
- Archer M, 2007, Making our Way Through the World, Cambridge University Press, Cambridge.
- Argyris C, 1977, *Double Loop Learning in Organisations*, Harvard Business Review, September-October.
- Ariel B and Wain N, 2014, *Tracking of Police Patrol*, Policing: A Journal of Policy and Practice, 8:3, 274-283.
- Arrow K, 1999, *Observations on Social Capital*, in Dasgupta, P and Stiglitz, J. (Eds), Social Capital: A Multifaceted Perspective, Washington: World Bank.
- Arthur WB, 2010, *Complexity, the Santa Fe Approach, and Nonequilibrium Economics*, History of Economic Ideas, 18:2, 149-166.
- Arthur WB, 2015, Complexity and the Economy, OUP, Oxford.
- Auty RM and Gelb AH, 2000, *Political Economy of resource-abundant states*, Annual Bank Conference on Developmental Economics, WB, Paris.
- Azen I, 1985, *From Intentions to Actions: A Theory of Planned Behaviour*, in Kuhl J and Beckmann J (Eds), Action Control, Springer, Berlin.
- Ballantyne WM, 2000, Essays and Addresses on Arab Laws, Routledge, NY.
- Bassey M, 1995, Creating Education Through Research: A Global Perspective For The 21st Century, Moor Press, NY.
- BBC, 2017, <http://www.bbc.co.uk/news/world-middle-east-35531174>
- Beard C and Amir N, 2010, *Interpretation in Social Anxiety: When meaning Precedes Ambiguity*, Cognitive Therapy Research, 33:4, 406-415.
- Beck U, 1992, Risk Society, Sage, London.
- Beck U, 2005, Power in the Global Age: A New Political Economy, Polity Press, London.
- Beinhocker ED, 2007, The Origin of Wealth: Evolution, Complexity, and the Radical Remaking of Economics, Random House, London.
- Bell S, 1972, Changing Technology and manpower requirements in the Engineering Industry, Sussex University Press, London.
- Benjamin W, 1970/1955, (Arendt H, Editor), Illuminations, Bodley Head, London.
- Berman M, 2010, *All that is solid melts into Air – The Experience of Modernity*, Verso, London.

- Bernstein B, 2000, Pedagogy, Symbolic Control and Identity: Theory, Research Critique, Rowman and Littlefield, Lanham.
- Bhaskar R, 1978, *On the Possibility of Social Scientific Knowledge and the Limits of Naturalism*, Journal for the Theory of Social Behaviour, 8, 1-28.
- Bigo D and Guild E (Eds.), 2005, Controlling Frontiers: Free Movement Into and Within Europe, Aldershot UK: Ashgate. ^[1]_{SEP}
- Bijker WE, 1987, Of bicycles, bakelites, and bulbs: Toward a theory of sociotechnical change, MIT press, Mass.
- Black D, 1997, *Avicenna on the ontological and epistemic status of fictional beings*, Documenti e studi sulla tradizione filosofica medievale, 8 425-453.
- Blumer H, 1969, Symbolic Interactionism: Perspective and Method, Prentice-Hall, New Jersey.
- Bødker S, 1989, *A human activity approach to user interfaces*, Human-Computer Interaction, 4L3, 171–195.
- Borgatti, S. P., and Foster, P. B. (2003) The network paradigm in organizational research: A review and typology. *Journal of Management* 29(6) 991-1013.
- Bouckaert BRA, 2007, *Bureaupreneurs in China*, Ghent University Press, Ghent
- Bourdieu P and Passeron J-C, 1979, Reproduction in Education, Society and Culture, Sage, London.
- Bourdieu P, 1971, “Systems of education and systems of thought,” in Young FD (Ed.), Knowledge and Control, Collier-Macmillan, London, pg. 200.
- Bourdieu P, 1977, Outline of a Theory of Practice, CUP, Cambridge.
- Bourdieu P, 1984, Distinction: A Social Critique of the Judgement of Taste, Cambridge, MA.
- Bourdieu P, 1990, The Logic of Practice, Polity Press, Cambridge.
- Bouveresse J, 2000, “Rules, Dispositions, and the Habitus,” in Shusterman R (Ed.), Bourdieu – A Critical Reader, Blackwell, Oxford, pg. 45 - 63.
- Bradford B, Jackson J and Stanko EA, 2009, *Contact and confidence: revisiting the impact of public encounters with the police*, Policing and Society, 19:1, 20-46
- Bresnen M, Edelman L and Scarbrough H, International journal of project management, 13:4, 210-54-61.
- Bristol-Rhys J, 2016, Emirati Women: Generations of Change, Hurst and Co, NY.
- Bristol-Rhys J, 2018, Future Perfect/Present Tense: Migrant Workers, Expats and Sponsors in Abu Dhabi, Hurst and Co, NY.
- Brouthers KD, Brouther LE and Werner S, 1996, ‘Dunning’s eclectic theory and the smaller firm: the impact of ownership and locational advantages on the choice of entry-modes in the computer software industry,’ International Business Review, Vol. 5, No. 4, pg. 377 – 394.
- Brown SA, Massey AP, Montoya-Weiss MM, Burkman JR, 2002, Do I really have to? User acceptance of mandated technology, European Journal of Information Systems, 11:4, 283–295.
- Brucato, B., 2015, Policing made visible: mobile technologies and the importance of point of view. Surveillance & society, 13 (34), 455–473. ^[1]_{SEP}
- Bryman A and Bell A, 2007, Business Research Methods, OUP, Oxford.
- Bryman A and Burgess RG (Eds.), 1994, Analysing Qualitative Data, Routledge, London.
- Bryman A, 2015, Social Research Methods, OUP, Oxford.
- Bulmer M, 1977, Sociological Research Methods, Transaction Publishers, NY.
- Buvik K, 2016, *The hole in the doughnut: a study of police discretion in a nightlife setting*, Policing and Society, 26:7, 771-788,
- Callon, M. (1994) *Is Science a Public Good? Science, Technology and Human Values*, Vol. 19, 395-424- Chiesa, V. and Piccaluga, A. (2000) Exploitation and Diffusion of Public Research: The
- Callon, M. 1986. Some elements of a sociology of translation: Domestication of the scallops and the fishermen of St Brieuc Bay in J. Law (ed.), Power, Action and Belief: A New Sociology of Knowledge? London: Routledge and Kegan Paul, pp. 196-233.
- Canadian Sociological Association. 2012. *Statement of Professional Ethics*. Retrieved February 15, 2014 (<http://www.csa-scs.ca/files/www/csa/documents/codeofethics/2012Ethics.pdf>).
- Castells M and Hall P, 1994, Technopoles of the World, Routledge, London.
- Castells M, 1997, The Information Age: The Rise of the Network Society, Vol. One, Blackwell, Oxford.
- Chalmers AF, 1994, What is this thing called science, OUP, Buckingham.
- Champion, D.J., 2005. *The American dictionary of criminal justice: key terms and major court cases*. Roxbury, Los Angeles, CA:
- Chan JB, 1997, Changing Police Culture: Policing in a Multicultural Society, CUP, Cambridge.
- Chan JB, Devery C and Duncan S, 2003, Fair Cop: Learning the Art of Policing, University of Toronto Press, Toronto.

- Chang H-J, 2005, *Kicking away the ladder: development strategy in historical perspective*, Anthem Press, London. Hutton and Giddens, 2000
- Charman S and Corcoran D, 2015, *Adjusting the police occupational cultural landscape: the case of An Garda Síochána*, *Policing and Society*, 25:5, 484-503
- Charmaz, K., 2006. *Constructing grounded theory: a practical guide through qualitative analysis*, London: Sage Publications Ltd. Available at: http://www.sxf.uevora.pt/wp-content/uploads/2013/03/Charmaz_2006.pdf.
- Chu D and Abdulla M, 2014. *Self-efficacy beliefs and preferred gender role in policing: an examination of police-women's perceptions in Dubai, the United Arab Emirates*, *British journal of criminology*, 54:3, 449-468. [SEP]
- Chu D and Sun I, 2007, *Female police officers' job-related attitudes: a comparative study of Taiwan and the United States*, *Women & criminal justice*, 18, 107-130. [SEP]
- Chu DC, 2017, *Employment motivation and job-related satisfaction: a comparison of police women's perceptions in Dubai and Taipei*, *Policing and Society*, September.
- Chu Y and Chen Y, 2016, *Dynamic Urban Surveillance Video Stream Processing Using Fog Computing*, IEEE, <http://ieeexplore.ieee.org/abstract/document/7545004/?reload=true> accessed 29 January 2018.
- Chu, D., 2013. Gender integration in policing: a comparison of male and female police officers' perceptions in Taiwan. *International journal of comparative and applied criminal justice*, 37 (2), 143-157. [SEP]
- Clarke R, 1988, *Information Technology and Dataveillance*, *Communications of the ACM*, 31:5, 498-512.
- Cole S, 2001, *Suspect Identities: A History of Fingerprinting and Criminal Identification*. Cambridge, Harvard University Press, [SEP]MA.
- Cooper A, *Surface Tensions: Emotion, Conflict and the Social Containment of Dangerous Knowledge* in Perri 6, Radstone S, Squire C and Treacher A (Eds.), 2007, *Public Emotions*, Palgrave, Basingstoke, Cpt-6.
- Cope J and Watts G. 2000, *Learning by Doing—an Exploration of Experience, Critical Incidents and Reflection in Entrepreneurial Learning*, *International Journal of Entrepreneurial Behaviour & Research*, 6, 104-124.
- Csikszentmihalyi M, 1996, *Creativity: Flow and the psychology of discovery and invention*, HarperCollins, New York.
- Cubitt TIC, Lesic R, Myers GL and Corry R, 2016, *Body-worn video*, *Australian and New Zealand Journal of Criminology*, 24:3, 1-18.
- Culhane SE and Schweitzer K, 2017, *Police shootings and body cameras one year post-Ferguson*, *Policing and Society*, 14, 27-38.
- Culhane SE, Boman J and Schweitzer K, 2016, *Public perceptions of the justifiability of police shootings: the role of body cameras in a pre/post-Ferguson experiment*, *Police quarterly*, 19, 251-274.
- Cunneen, C, and T. Robb (1987) *Criminal Justice in North-East New South Wales*.
- Czarniawska-Joerges, B. (1992) *Exploring Complex Organizations: A Cultural Perspective*. Newbury Park, Calif.: Sage. [SEP]
- Damasio AR, 1994, *Descartes error: emotion, rationality and the human brain*, Penguin, London.
- Daniels H (Ed), 2012, *Vygotsky and Sociology*, Routledge, London.
- Daniels H, 2001, *Vygotsky and Pedagogy*, Routledge Falmer, London.
- Davidson C, 2009, *Abu Dhabi's New Economy: Oil, Investment and Domestic Development*, *Middle East Policy*, XV1:2, 59-79.
- Davidson CM, 2005, *The United Arab Emirates: A study in Survival*, Lynne Rienner, Paris
- De Guzman MC and Frank J, 2004, *Policewomen and their problems: the Philippine context*. *Policing: An international journal of police strategies & management*, 27:3, 396-412. [SEP]
- Dean M, 1999, *Governmentality: Power and Rule in Modern Society*, Sage, London.
- Delamont S, 2004, *Ethnography and participant observation*, in Seale C, Gobo G and Gubrium J (Es.), *Qualitative Research practices*, Sage London 217-229.
- Demirkol I and Nalla MN, 2017, 2017, *How does police culture shape officers' support for community policing?*, *Policing and Society*, 14, 27-38.
- Dewey J, 1939, *Freedom and Culture*, Greenwood Press, NY.
- Doern R and Goss D, 2014, *The Role of Negative Emotions in the Social Processes of Entrepreneurship: Power Rituals and Shame-Related Appeasement Behaviors*, *Entrepreneurship Theory and Practice*, 38, 863-890.
- Drover P and Ariel B, 2015, *Leading an Experiment in Police Body-Worn Video Cameras*. *International Criminal Justice Review*, Autumn Edition.

- Duffy FM 2003, *I think, therefore I am resistant to change*, *Journal of Staff Development*, 24:1, 30-36.
- e-services portal, 2018, <https://www.abudhabi.ac/portal/public/en/homepage/benefits-for-nationals> (Accessed 28 January 2018)
- Easton G, 2010, *Critical Realism in Case Study Research*, *Industrial Marketing Management*, 39, 118-128.2006
- Ehrenberg J, 2017, *Civil Society: The Critical History of an Idea*, New York University Press, NY.
- EIP, 2012, Conference Issues [online] available at http://www.excellenceinpolicing.org.uk/wpcontent/uploads/2012/07/EIP12_outline-Programme_v0-11-2.pdf (Accessed 210118).
- Eklblom P, Armitage R, Monchuk L and Castell B, 2013, Crime Prevention Through Environmental Design in the United Arab Emirates: A Suitable Case for Reorientation? *Built Environment*, 39 :1, 92-113.
- Elster J, 1978, *Logic and society: Contradictions and possible worlds*, Wiley, NY.
- Engeström Y and Kerouac H, 2007, *From workplace learning to inter-organisational learning and back: the contribution of activity theory*, *Journal of Workplace Learning*, 19:6, 336-342.
- Engeström Y, 1987, *Learning by expanding – an activity-theoretical approach to development research*, Orienta-Konsultit, Helsinki. Habermas' (1984
- Engeström Y, Miettinen R and Punamaki RL, 1999, *Perspectives on Activity Theory*, CUP, Cambridge.
- Farganis J, 2008, *Readings in Social Theory*, McGraw-Hill, Boston, MA.
- Farzi, R., 2016. *Taming Translation Technology for L2 Writing: Documenting the Use of Free Online Translation Tools by ESL Students in a Writing Course*. University of Ottawa.
- Fernando M and Jackson B, 2006, The influence of religion-based workplace spirituality in business leaders' decision making: an inter-faith study, *University of Wollongong*, Faculty of Wollongong, working papers, 12,1, 23-39.
- Feyerabend P, 1975, *Against Method*, Verson, London.
- Fielding N and Innes M, 2006, *Reassurance Policing, Community Policing and Measuring Police Performance*, *Policing & Society*, 16:02, 127-145
- Fine B, 2000, *Social Capital Versus Social Theory*, Routledge, London.
- Fishbein M and Ajzen I, 1975, *Predicting and changing behaviour*, Psychology Press, NY.
- Fisher A, 1993, *The Logic of Real Arguments*, CUP, Cambridge.
- Fitz J, 2007, *Knowledge, Power and Educational Reform: Applying the Sociology of Basil Bernstein*, 1998, *British Journal of Sociology of Education*, 28:2, 273-279.
- Fitzpatrick T, 2010, *Critical Theory, Information Society and Surveillance Technologies*, *Information, Communication and Society*, 5:3, 357-378.
- Flanagan, J. C. 1954. The Critical Incident Technique. *Psychological bulletin*, 51, 327.
- Fleming S and McNamee M, 2005, *The ethics of corporate governance in public sector organizations*, *Public Management Review*, 7:1, 135-144.
- Ford, D. (2015). South Carolina policeman charged with murder. CNN (Retrieved 2015, April 9).
- Foucault M, 1975, *Discipline and Punishment*, Routledge, NY.
- Foucault M, 1980, (Gordon Ed), *Power/Knowledge: Selected Interviews and Other Writings 1972-1977*, Harvester, London.
- Foucault M, 1988, *Politics, Philosophy, and Culture: Interviews and Other Writings, 1977-1984*, (M. Morris and P. Patton Eds.), Routledge, New York.
- Foucault, M. (1991). Remarks on Marx: conversations with Duccio Trombadori (R. J.
- Fraser N, 1990, *Rethinking the public sphere: A contribution to the critique of actually existing democracy*, in Calhoun C, 1991, *Habermas and the Public Sphere*, MIT Press, MA.
- Freeman C and Perez C, 1988, *Structural crises of adjustment, business cycles and investment behaviour*, in Dosi G *et al*, *Technical Change and Economic Theory*, pg. 38-66.
- Freidson E, 1988, *Profession of Medicine: a Study of the Sociology of Applied Knowledge*, The University of Chicago Press, Chicago.
- Fukushima M, 2017, *The Experimental Zone of Learning: Mapping the Dynamics of Everyday Experiment, Mind, Culture, and Activity*, September.
- Fukuyama F, 1992, *The End of History and the Last Man*, Free Press, New York.
- Galasinski D, 2000, *The Language of Deception*, Sage, London.
- Gaub, J. E., Choate, D. E., Todak, N., Katz, C. M., & White, M. D. (2016). Officer perceptions of body-worn cameras before and after deployment: A study of three departments. *Police Quarterly*, 19(3), 275–302.
- Geiselman RE, Fisher RP, MacKinnon DP, and Holland HL, 1985, *Eyewitness Memory Enhancement in the Police Interview: Cognitive Retrieval Mnemonics Versus Hypnosis*, *Journal of Applied*

- Psychology, 70:2, 385-401.
- Gell-Mann M, 1995, The Quark and the Jaguar: Adventures in the Simple and the Complex, Abacus, London.
- Gerschenkron A, 1966, Economic backwardness in historical perspective, Harvard University Press, MA.
- Giddens A, 1998, The Third Way, Polity, Cambridge.
- Gilbert N, 2008, Researching Social Life, Sage, London.
- Glaser BG and Strauss AT, 1978, Grounded Theory, Huber, UK.
- Global Competitiveness Report, 2017-2018, available at (accessed 210118)
- Goffman E, 1963, Behaviour in Public Places, Free Press, NY.
- Gold RL, 1997, *The ethnographic method in sociology*, Qualitative Inquiry, 3:4, 388-402.
- Goldsmith A, 1990, *Taking police culture seriously: Police discretion and the limits of law*, Policing and Society: An International Journal, 1:2, 91-114.
- Goldstein, H. (1977) *Policing a Free Society*. Cambridge, Mass.: Bollinger^[1]_{SEP}.
- Goodall, M. (2007). Guidance for the police use of body-worn video devices. London: Home Office. <http://library.college.police.uk/docs/homeoffice/guidance-body-worn-devices.pdf>.
- Goodhart D, 2017, The Road to Somewhere: The Populist Revolt and the Future of Politics, Hurst and Co, London.
- Goodhart D, 2017, The Road to Somewhere: The Populist Revolt and the Future of Politics, Hurst and Co, London.
- Granovetter M, 1985, Economic action and social structure: The problem of embeddedness, The American Journal of Sociology, 91:3, 481-510.
- Green, A. I., 2012, *Erotic capital' and the power of desirability: Why 'honey money' is a bad collective strategy for remedying gender inequality*, University of Toronto, Canada, 1-3.
- Grusec JE, Hastings PD, 2007, Handbook of Socialization: Theory and Research, Guilford Press, Guilford.
- Gutas D, 2014, Avicenna and the Aristotelian Tradition, Brill, Leiden.
- Habermas J, 1986, The Theory of Communicative Action (Vol-1: Reason and the Rationalisation of Society), Polity Press, Cambridge.
- Habermas J, 1994, The Structural Transformation of the Public Sphere, Polity, Cambridge, UK.
- Hammerich K and Lewis RD, 2013, Fish Can't See Water – how national culture can make or break your corporate strategy, Wiley, London.
- Hammersley M and Atkinson P, 1995, Ethnography: Principles in practice, Routledge, London.
- Hampden-Turner C, 1990, Charting the Corporate Mind, Basil Blackwell, Oxford.
- Harvey D, *Flexible Accumulation through Urbanisation*, in Amin A (Ed.), 1994, Post-Fordism, Blackwell, Oxford, Cpt. 12.
- Hasan R, 2001, *Understanding Talk: Directions from Bernstein's Sociology*, International Journal of Social Research Methodology, 4:1, 5-9.
- Hasan R, 2005, *Semiotic mediation, language and society: three exotripic theories: Vygotsky, Halliday and Bernstein*, in Webster JJ (Ed.), Language, society and consciousness, Equinox, London.
- Headley AM, Guerette RT and Shariati A, 2017, *A field experiment of the impact of body-worn cameras on police behaviour and perceptions*, Journal of Criminal Justice, 53, 102-109.
- Heard-Bey F, 1984, From Trucial States to UAE, Longman, London.
- Hedberg EC, Katz CM and Choate DE, 2017, *Body-worn cameras and citizen interactions with Police Officers: Estimating Plausible Effects Given Varying Compliance Levels*, Justice Quarterly, 34:4, 627-651.
- Henry, V. (1994) 'Police Corruption: Tradition and Evolution' in Bryett, K., and C. Lewis (Eds) (1994) *Un-Peeling Tradition: Contemporary Policing*. Melbourne: Macmillan.
- Hills A, 2000, Policing Africa: internal security and the limits of liberalization, Lynne, London.
- Hofstede, G. 1980, Culture and organizations, International Studies of Management & Organization, 10, 15-41.
- Holland D, Lachiotte L, Skinner D and Cain C, 1998, Identity and agency in cultural worlds, Harvard University Press, MA.
- Hollis M and Lukes S, Rationality and Relativism, Blackwell, Oxford.
- Humaid MS, 2008, *Police Corruption and Strategies for its prevention in the Emirate of Abu Dhabi*, Unpublished Doctoral Thesis, Faculty of Law, Queensland University of Technology.
- Hurriez SH, 2011, Folklore and Folklife in the UAE, Routledge, NY.
- Hutton W And Giddens M, 2000, Global Capitalism, New Press, NY.
- Illeris K, 2002, *The Three Dimensions of Learning: Contemporary Learning Theory in the Tension Field Between the Cognitive, the Emotional and the Social*, (Leicester, UK: NIACE).^[1]_{SEP}

- Illeris K, 2003, *Towards a contemporary and comprehensive theory of learning*, International Journal of Lifelong Education, 22:4, 396-406.
- Illeris K, 2003a, *Learning and life age*, Lifelong Learning in Europe, 8:1. [SEP]
- Illeris K, 2004, *Learning in Working Life*, Learning Lab Denmark, Roskilde University Press.
- Illeris, K. (2003b), *Adult education as experienced by the learners*, International Journal of Lifelong Education, 22:1.
- Jankélévitch V and Hobart A, 1996, *Should we pardon them?* Critical Inquiry, 22:3, Spring.
- Jenks C, 1993 *Culture*, Routledge, London.
- Jennings WG, Lynch MD and Fridell LA, 2015, *Evaluating the impact of police officer body-worn cameras (BWCs) on response-to-resistance and serious external complaints: evidence from the Orlando police department (OPD) experience utilizing a randomized controlled experiment*, Journal Of Criminal Justice, 43:6, 480–486.
- Johnson C, 1982, *MITI and the Japanese Miracle*, Stanford University Press, CA.
- Johnson T, 1972, *Professionals and Power*, Macmillan, London.
- Jones CW, 2017, *Bedouins into Bourgeois: Remaking Citizens for Globalisation*, CUP, Cambridge.
- Kaptelinin V and Nardi B, 2012, *Activity theory in HCI: Fundamentals and reflections*, Morgan and Claypool San Rafael, California.
- Kaptelinin V and Nardi B, 2017, *Activity Theory as a Framework for Human-Technology Interaction Research*, Mind, Culture, and Activity, November.
- Kapur V, 2011, *UAE leads Arab world in gender equality: WEF*, in *Explore DMI*, available from: <http://www.emirates247.com/business/uae-leads-arab-world-in-gender-equality-wef-2011-11-03-1.426750> [Accessed 28 March 2016]. [SEP]
- Katz CM, Kurtenbach M, Choate DE and White MD, 2015, *Phoenix, Arizona, smart policing initiative: evaluating the impact of police officer body-worn cameras*, Bureau of Justice Assistance, U.S. Department of Justice.
- Khaleej Times (2018) <https://www.khaleejtimes.com/nation/government/uae-has-lowest-recorded-violent-crimes-rate-in-the-world> (Accessed 28 January 2018)
- Kim B and Merlo AV, 2010. *Policing in Korea: why women choose law enforcement careers*, Journal Of Ethnicity In Criminal Justice, 8, 1–17. [SEP]
- Klitgaard RE, 1988, *Controlling Corruption* (Berkeley: University of California Press, Berkeley.
- Kolb D, 1984, *Experiential Learning: Experience as the Source of Learning and Development*, Englewood Cliffs, Prentice Hall, NJ.
- Kooiman J, 1999, *Social-Political Governance*, Public Management: An International Journal of Research and Theory, 1:1, 67-92.
- Kooiman J, 2003, *Governing as Governance*, Thousand Oaks, London
- Kuutti K, 1991, *Activity theory and its applications to information systems research and development*, in Nissen HE, Klein HK and Hirschheim R (Eds.), *Information systems research Arena of the 90's*, (pp.). North Holland Amsterdam, Netherlands, pages 525–549.
- Kyle JM, 2016, *Police body-worn camera policy: balancing the tension between privacy and public access in state laws*, Notre Dame Law Review, 92:1, 479-510.
- Kyle MJ and White DR, 2017, *The impact of law enforcement officer perceptions of organizational justice on their attitudes regarding body-worn cameras*, Journal of Crime and Justice, 40:1, 68-83.
- Lakoff G and Johnson M, 1980, *Metaphors we live by*, The University of Chicago Press, Chicago, IL.
- Lane JF, 2000, *Pierre Bourdieu*, Pluto Press, London.
- Lapsley I and Llewellyn S, 1995, *Real life constructs: the exploration of organisational processes in case studies*, Management Accounting Research, 6, 223-235.
- Latour B, 1987, *Science in Action*, Milton Keynes, England: Open University Press.
- Latour B, 1988, *The Prince for machines as well as for machinations*, in B. Elliot (ed.), *Technology and Social Process*, Edinburgh: University of Edinburgh Press, 20-43.
- Latour B, Mauguin P and Teil G, 1992, *A note on socio-technical graphs*, Social Studies of Science, 22: 33-57.
- Law J and Callon M, 1992, *The life and death of an aircraft: a network analysis of technical change*, in Bijker W and Law J (Eds), *Shaping Technology/Building Society: Studies in Sociotechnical Change*, The MIT Press, Cambridge, MA.
- Lee RM and Stanko B (Eds), 2003, *Researching Violence: Essays on Methodology and Measurement*, Routledge, London.
- Lee RM, 1993, *Doing Research on Sensitive Topics*, Sage, London.
- Lefebvre H, 1974, *The Production of Space*, Blackwell, Oxford.
- Lincoln TA and Guba EG, 1985, *Judging the quality of case study reports*, International Journal of Qualitative Studies in Education, 3:1.

- Lipset S, 1977, American exceptionalism reaffirmed, *International Review of Sociology Series-1*, 2:3.
- Lipsky M, 2010, *Street-Level Bureaucracy: Dilemmas of the Individual in Public Services*, Russell Sage Foundation, NY.
- Ileris K, 2006, *Lifelong learning and the low-skilled*, *International Journal of Lifelong Education*, 25:1, 15 – 28. ^[1]_{SEP}
- Loftus B, 2015, *Border regimes and the sociology of policing*, *Policing and Society*, 25:1, 115-125
- Loyens K, 2009, *Occupational Culture in Policing Reviewed: A Comparison of Values in the Public and Private Police*, *International Journal of Public Administration*, 32:6, 461-490.
- Lukes S, 1974, *Power: A Radical View*, Macmillan, London.
- Lune H and Berg BL, 2017, *Qualitative Research Methods for Social Sciences*, Pearson Education, Harlow.
- Lyon D and Wood D, 2012, A report on the surveillance society, available at (accessed 210128) <https://ico.org.uk/media/about-the-ico/documents/1042388/surveillance-society-public-discussion-document-06.pdf>
- Lyon D, 2001, *The Surveillance Society: Monitoring Everyday Life*, OU Press, Buckingham.
- Lyon D, 2003, *Surveillance after September 11*, Polity Pressm Cambridge.
- MacKenzie D and Wajcman J, 1985, *The Social Shaping of Technology*, OU Press, Milton Keynes.
- Macpherson Report, 1999, *The Stephen Lawrence Inquiry*, (accessed 300118) available at https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/277111/4262.pdf
- Madison DS, (2005). *Critical ethnography: Method, ethics, and performance*, Sage, Thousand Oaks, CA.
- Maguire ER, 1997, *Structural change in large municipal police organizations during the community policing era*, *Justice quarterly*, 14:3, 547–576. ^[1]_{SEP}
- Makitalo A and Saljo R, 2002, *Talk in institution context and institutional context in talk: categories as social practice*, *Text*, 22:1, 57-82.
- Manguel A, 2006, *A Reading Diary: A year of favourite books*, Canon Gate, Edinburgh
- Manguel A, 2008, *The Library at Night*, Koopf, Canada.
- Manning P, 1993, *Toward a Theory of Police Organization Polarities and Change*, Paper to the International Conference on 'Social Change in Policing', Taipei, 3—5 August.
- Marangunić A and Granic A, 2015, *Technology acceptance model: a literature review from 1986 to 2013*, *Universal Access in the Information Society*, 14:1, 81-95.
- Margalit A, 2002, *The ethics of memory*, Harvard University Press, MA.
- Margolis J, 2000, Pierre Bourdieu: Habitus and the Logic of Practice, in Shusterman R (Ed.), *Bourdieu – A Critical*
- Smallwood JM, McSpadden M and Schooler JW, 2008, When attention matters: The curious incident of the wandering mind, *Memory and Cognition*, 36:6, 1144-1150.
- Marks M and Singh AM, 2015, *Conclusion: Taking Stock And Looking Ahead In Police Culture Studies*, *In Police Occupational Culture*. Published online: 08 Mar 2015; 349-367.
- Marx GT, 1985, *The Surveillance Society: the threat of 1984-style techniques*, *The Futurist*, June: 21-26.
- Mathiesen T, 1997, Michel Foucault's Panopticon Revisited, *Theoretical Criminology*, 1:2, 215-234.
- Mayer JH and Land R, 2003, *Threshold concepts in troublesome knowledge*, *Higher Education*, 49, 373-388.
- McCoy C, 2010, *Holding police accountable*, *Urban Policy Press*, Washington.
- McGregor SL and Murname JA, 2010, *Paradigm, methodology and method: Intellectual integrity in consumer scholarship*, *International Journal of Consumer Studies*, 34:4, 419-427.
- Mears DP, Craig MO, Steward EA and Warren PY, 2017, *Thinking fast, now slow: how cognitive biases may contribute to racial disparities in the use of force in police-citizen encounters*, *Journal of Criminal Justice*, 53, 12-24.
- Meijers H *et al*, 1997, *Democracy, migrant and police in the European Union*, Forum, Utrecht.
- Mernissi F, 2011, *Beyond the Veil: Male-Female Dynamics in Muslim Society*, Saqi Essentials, Cambridge, MA.
- Merton, Robert. 1968 [1949]. *Social Theory and Social Structure*. New York: Free Press.
- Miles NB and Huberman AM, 1984, *Qualitative Data Analysis*, London, Sage.
- Miller RL, 2000, *Researching Life Stories and Family Histories*, Sage, London.
- Miłosz C, 1981, *The captive mind*, Vintage, London.
- Mises, L von, 1960, *Epistemological Problems of Economics*, Van Nostrand, London.
- Moore M and Hartley J, 2008, *Innovations in governance*, *Public Management Review*, 10:1, 3-20.
- Morais-Storz M Nguyen N, 2017, *The role of unlearning in metamorphosis and strategic resilience*, *The Learning Organization*, 24:2, 2017, 93-106.
- Morrow, W. J., Katz, C. M., & Choate, D. E. (2016). Assessing the impact of police body- worn cameras on arresting, prosecuting, and convicting suspects of intimate partner violence. *Police Quarterly*, 19(3), 303–325.

- Morton, J. (1993) *Bent Coppers*. London: Warner^[1]_{SEP}
- Naffis-Sahely A, 2017, *The Promised Land: Poems from Itinerant Life*, Penguin, Harmsworth.
- Nardi B (Ed.), 1996, *Context and consciousness: activity theory and human-computer interaction*, MIT Press Cambridge, MA.
- Nardi, B. (Ed.), (1996, *Context and consciousness: Activity theory and Human-Computer Interaction*, Cambridge, MA: MIT Press.
- Natarajan, M., 1994. A comparative analysis of women policing in India. *International journal of comparative and applied criminal justice*, 18, 53–61.
- Neely A, *Measuring performance: the operations management perspective*, in Neely A (Ed.), 2007, *Business Performance Management*, CUP, Cambridge, Cpt. 3.
- Nelson RR and Winter SG, 1982, *An Evolutionary Theory of Economic Change*, Belknap Press NY
- Nonaka I and Takeuchi H, 1995, *The Knowledge-Creating Company*, OUP, Oxford.
- Nowacki JS Dale Willits JSD, 2016, *Adoption of body cameras by United States police agencies: an organisational analysis*, *Policing and Society*, November.
- Numbeo 2018, available at the following address, (accessed 240118)
https://www.numbeo.com/crime/compare_cities.jsp?country1=United+Kingdom&city1=Manchester&country2=United+Kingdom&city2=London (Accessed 28 January 2018)
- ODS Consulting (2011). *Body worn video projects in Paisley and Aberdeen, self evaluation*. Glasgow: ODS Consulting.
- Oettingen G, Pak H and Schnetter K, 2001, *Self-regulation of goal setting: turning free fantasies about the future into binding goals*, *Journal of Personal Social Psychology*, 80, 736–753.
- Oliver RI and Bearden WO, 1983, *The Role of Involvement in Satisfaction Processes*, in *Advances in Consumer Research*, Ann Arbor, MI: Association for Consumer Research.
- Örtenblad A, 2007, *Senge's many faces: Problem or opportunity?* *The Learning Organization*, 14:2, 108-122.
- Orwell G, 1984, *Nineteen Eight-Four*, Penguin, London.
- Owens, C., Mann, D., & McKenna, R. (2014). The Essex body worn video trial. College of Policing.
- Owens, C., Mann, D., and McKenna, R., 2014. The Essex body worn video trial: the impact of body worn video on criminal justice outcomes of domestic abuse incidents. College of Policing. Available from: http://www.bwvsg.com/wp-content/uploads/2013/07/BWV_ReportEssTrial.pdf^[1]_{SEP}
- Pagliarella C, 2016, *Police Body-Worn Camera Footage: A Question of Access*, 34 *Yale Law and Policy Review*, 34, 533.
- Paoline EA, 2004, *Shedding light on Police Culture: an Examination of Officers' Occupational Attitudes*, *Police Quarterly*, 7:2, 205-236.^[1]_{SEP}
- Paoline EA, Myers SM and Worden RE, 2000, *Police culture, individualism, and community policing: Evidence from two police departments*, *Justice Quarterly*, 17:3, 575-605
- Parsons T, 1956, *Suggestions for a Sociological Approach to the Theory of Organizations*, *Administrative Science Quarterly*, 1:2, 225-239.
- Peck, J.H., 2015, *Minority perceptions of the police: a state-of-the-art review*, *Policing: an International Journal of Police Strategies & Management*, 38, 173–203.^[1]_{SEP}
- Pedler M (Ed), 1983, *Action Learning in Practice*, Gower, Aldershot.
- Penal Law of UAE (1972) <http://www.icla.up.ac.za/images/un/use-of-force/asia-pacific/UnitedArabEmirates/Penal%20Code%20United%20Arab%20Emirates%201987.pdf> (Accessed 28 January 2018)
- Pettigrew AM, 1992, *The Character and Significance of Strategy Process Research*, *Strategic Management Journal*, 13, 5-16.
- Pinto VC, 2012, *Nation-building. State and Gender framing of Women's Rights in the UAE (1971-2009)*, Ithaca Press, NY.
- Polkinghorne D, 2005, *Language and meaning: data collection in qualitative research*, *Journal of Counselling Psychology*, 52:137–145.
- Powell WW and DiMaggio PJ (Eds), 1991, *The New Institutionalism in Organizational Analysis*, University of Chicago Press, Chicago, IL.
- Prenzler T, 1997, *Is there a police culture?* *Australian Journal Of Public Administration*, 56:4, 47–56. Princeton: Princeton University Press,
- Putnam R, 1981, *Reason, Truth, and History*, CUP, Cambridge.
- Putnam R, 1993, *Making Democracy Work: Civic Tradition in Modern Italy*, Simon and Schuster, NY.
- Putnam R, 2000, *Bowling Alone: The Collapse and Revival of American Community*, Simon and Schuster, NY.
- PWC, *Economic crime in UAE*, available at www.pwc/me (accessed 210118).

- Raelin JA, 2000, Work-based learning: The new frontier of management development, Addison-Wesley, Reading.
- Rauschnabel PA and Young KR, 2016, *Augmented reality smart glasses: an investigation of technology acceptance drivers*, International Journal of Technology Marketing, 11:2, 123-147.
- Rawlings P, 1995, *The idea of policing: A history*, Policing and Society: An International Journal, 5:2, 129-149.
- Read T and Rogers C, 2011, Policing Young People. Exeter, UK: Learning Matters, Ltd, UK. [11]
- Ready JT and Young JTN, 2015, *The impact of on-officer video cameras on police–citizen contacts: findings from a controlled experiment in Mesa, AZ*, Journal of experimental criminology, 11:3, 445–458.
- Reiner R, 2015, Revisiting the Classics: Three Seminal Founders of the Study of Policing: Michael Banton, Jerome Skolnick and Egon Bittner, Policing and Society, 25:3, 308-327.
- Ricoeur P, 1977, The Rule of Metaphor: Multi-Disciplinary Studies in the Creation of Meaning in Language, University of Toronto Press. Toronto.
- Ricoeur P, 1984, Time and narrative, University of Chicago Press, Chicago, IL.
- Ricoeur P, 1995, Oneself as Another, University of Chicago Press, Chicago.
- Ricoeur P, 2004, Memory, history, forgetting, University of Chicago Press, IL.
- Rieff D, 2016, In praise of forgetting – historical memory and its ironies, Yale University Press, London.
- Riessman CK, 1993, Narrative Analysis, Sage, London.
- Riessman CK, 2008, Narrative Methods for the Human Sciences, SAGE Publications, CA.
- Robels AC, 1994, French Theories of Regulation and Conceptions of the International Division of Labour, St Martins Press, London.
- Robocop, 2018, <http://www.dailymail.co.uk/sciencetech/article-3151370/Abu-Dhabi-s-new-245mph-robocop-car-costs-3-4m-cameras-recognise-drivers-faces-high-speed-chases.html> (Accessed 28 January 2018)
- Rodik D, 2017, Straight Talk on Trade – Ideas for a Sane World Economy, Princeton University Press, Princeton, MA.
- Rosenberg N, 1982, Inside The Black Box - Technology And Economics, Cambridge University Press, New York.
- Rothstein B, 2011, The Quality of Government: Corruption, Social Trust, and Inequality in International Perspective, University of Chicago Press, IL.
- Rowe M, 2007, *Rendering Visible the Invisible: Police Discretion, Professionalism and Decision-making*, Policing and Society, 17:3, 279-294.
- Roy, A. (2014). On-officer video cameras: Examining the effects of police department policy and assignment on camera use and activation. Arizona State University (Doctoral Thesis).
- Sackmann, S. (1991) *Cultural Knowledge in Organizations*. Newbury Park, Sage Calif.
- Said EW, 1978, Orientalism, OUP, Oxford.
- Sanders CB and Hannem S, 2044, *Policing “the Risky,” Technology and Surveillance in Everyday Patrol Work*, London.
- Sandhu A, 2017, ‘I’m glad that was on camera: a case study of police officers’ perceptions of cameras, Policing and Society.
- Sassen S, 2006, Cities in a World Economy, Pine Forge Press, London.
- Sassen S, 2015, Losing Control? Sovereignty in an Age of Globalisation, Columbia University Press, NY.
- Savage, S., 2007. *Police reform: forces of change*. Oxford: Oxford University Press. [12]
- Sayer A, 2000, Realism and Social Science, Sage, London.
- Scarborough H, 2004, *Social practices and the management of knowledge in project environments*, in Schein E, 1985, Organizational Culture and Leadership, Jossey-Bass, SF
- Schön D, 1983, The Reflective Practitioner: How professionals think in action, Sage, London.
- Schvaneveldt PL, Kerpelman JL and Schvaneveldt JD, 2005, *Generational and cultural changes in family life in the United Arab Emirates: a comparison of mothers and daughters*, Journal of comparative family studies, 36:1, 77–91.
- Scott JC, 1998, Seeing Like a State, Yale University Press, Newhaven.
- Sekaran U and Bougie R, 2013, Research Methods for Business, Wiley, Chichester.
- Sennett R, 2006, The Culture of the New Capitalism, New Haven, London.
- Sennett R, 2008, The Craftsman, Allen Lane, London.
- Sennett R, 2018, Building and Dwelling: Ethics for the City, Penguin, London.
- Sennett R, *Street and Office: two sources of identity*, in Hutton W And Giddens M, 2000, Global Capitalism, New Press, NY.

- Sheptycki J, 2000, *Editorial Reflections on Surveillance and ILP*, Policing and Society, 9:311– 14.
- Sheptycki J, 2004, *Organizational Pathologies in Police Intelligence Systems: Some Contributions to the Lexicon of ILP*, European Journal of Criminology, 1:3, 307–32.
- Silverman D, 2016, Qualitative Research, Sage, London.
- Sklansky DA, 2007, *Seeing blue: police reform, occupational culture and cognitive burn-in*, Sociology of crime, law and deviance, 8, 19–45. [1]
- Skogan WG, 2006. *Asymmetry in the impact of encounters with the police*, Policing and Society, 16:2, 99-126.
- Smallwood J, 2013, *Distinguishing how from why the mind wanders: a process–occurrence framework for self-generated mental activity*, Psychological bulletin, 139:3, 519.
- Smallwood JM and Schooler JW, 2006, *The restless mind*, Psychological Bulletin, 132, 946-958.
- Smykla JO, Crow MS, Crichlow VJ and Snyder JA, 2015, *Police body-worn cameras: perceptions of law enforcement leadership*, American Journal Of Criminal Justice, 1–20. [1]
- Soffan LU, 2016, *The Women of the UAE*, Routledge, London
- Solomos J, 1988, *Black Youth, Racism and the State*, Cambridge, MA.
- Solow RM, 2000, *Notes on Social Capital and Economic Performance*, in Dasgupta P. and Serageldin I. (Eds), *Social Capital: A Multifaceted Perspective*, World Bank, Washington, 6-10.
- South China Morning Post, 040218, *Chinese police testing cameras with 720 degree field of view, inbuilt facial recognition*, available at <http://www.scmp.com/tech/china-tech/article/2131856/chinese-police-testing-body-cameras-720-degree-field-view-inbuilt> (accessed 210118).
- Standing G, 2016, *The Corruption of Capitalism – Why Rentiers Thrive and Work Does Not Pay*, Biteback Publishing, London.
- Straub D, Keil M and Brenner W, 1997, Testing the technology acceptance model across cultures: a three-country study, *Information Management*, 33:1, 1–11
- Strauss A and Corbin J, 1998, *Basics of Qualitative Research: Techniques and Procedures for Developing Grounded Theory*, Sage, London.
- Strobl S and Sung HE, 2009, *Attitudes about gender integration among Bahraini policewomen*, Policing & society, 19:4, 425–441.
- Strobl S, 2008, *The women's police directorate in Bahrain: an ethnographic exploration of gender segregation and the likelihood of future integration*, International Criminal Justice Review, 18:1, 39–58.
- Strobl S, 2016, *Policing in the Eastern Province of Saudi Arabia: understanding the role of sectarian history and politics*, Policing and Society, 26:5, 544-562.
- Swan J and Scarborough H, 2001, *Knowledge management*, Routledge, London.
- Tarhini A, Hassouna M, Abbasi MS and Orozco J, 2015, *Towards the acceptance of RSS to support learning: An empirical study to validate the technology acceptance model in Lebanon*, Electronic Journal of e-Learning, 13:1, 30-41.
- Taylor C, 2000, “To Follow a Rule,” in Shusterman R (Ed.), *Bourdieu – A Critical Reader*, Blackwell, Oxford, pg. 29 - 44.
- Taylor DW, 2000, *Facts, Myths and Monsters: Understanding the Principles of Good Governance*, International Journal of Public Sector Management, 13:2, 108–24. [1]
- Taylor E, 2016, *Lights, camera, redaction...police body-worn cameras: autonomy, discretion and accountability*, Surveillance & Society, 14:1, 128–132.
- Temple B, 2008, Narrative analysis of written texts: reflexivity in cross language research, *Qualitative Research*, 8:355–365.
- Thompson P and McHugh D, 1990, *Work Organisation*, Macmillan, London.
- The National 31 Jan 2018, <https://www.thenational.ae/uae/abu-dhabi-is-the-safest-city-on-the-planet-with-lowest-crime-rate-numbeo-com-1.70632> (Accessed 28 January 2018)
- Torstendahl R, 1990, Essential properties, strategic aims and historical development: three approaches to theories of professionalism, in Burrage M and Torstendahl R (Eds.), *The Formation of Professions: Knowledge, State and Strategy*, Sage, London.
- Triandis HC, 1994a, *Cross-cultural Industrial and Organizational Psychology*, in Triandis HC, Dunning MD and Hough LM, (Eds.), *Handbook of Industrial and Organisational Psychology*, OUP, Oxford.
- Trice HM, 1980, *Occupational Subcultures in the Workplace*, ILR Press, NY.
- Turcan RV, 2006, *De-Internationalization of Small High Technology Firms: An International Entrepreneurship Perspective*. Videnbasen for Aalborg Universitet VBN, Aalborg Universitet Aalborg University, Det Samfundsvidenskabelige Fakultet The Faculty of Social Sciences, TBRP-Theory Building Research Programme TBRP-Theory Building Research Programme.
- Turkle S, 2011, *Alone Together*, Basic Books, NY.

- UAE Government, 2017, <https://www.weforum.org/agenda/2017/05/how-digital-technology-is-transforming-dubai/> (accessed 210118)
- UAE Justice and Vision, 2021, Dubai, UAE
- UAE Penal Code, 2018, <https://www.adjd.gov.ae/sites/Authoring/AR/ELibrary%20Books/E-Library/PDFs/Criminal%20Law%20-%20Part%20One-%20The%20Crime.pdf>
- UAE Police, 2018, <https://www.adpolice.gov.ae/en/Pages/home.aspx>
- UAE, 2017, *Crime and Safety Report: Abu Dhabi*
- Veblen TB, 1919 (1990 reprint), *The Place of Science in Modern Civilisation and Other Essays*, Transaction, New Brunswick.
- Venkatesh V and Davis FD, 2000, *A theoretical extension of the technology acceptance model*, *Management Science*, 46:2, 186-204.
- Vygotsky L (1997) *The collected works of Ls vygotsky: Problems of the theory and history of psychology* (Vol. 3). Cambridge MA. Harvard University Press.
- Vygotsky L. (1987) (Rieber W and Wollock J, Eds.), *Problems of the Theory and History of Psychology, Collected Works, Vol 3. Chapter 9. The Problem of Consciousness*, 129-138. NY. Plenum.
- Vygotsky LS, 1934 (1987), *The collected works of LS Vygotsky: Vol. 1, Problems of general psychology*, Rieber RW & Carton AS (Eds), Plenum, NY.
- Waddington PAJ, 1999, *Police (Canteen) Sub-Culture: An Appreciation*, *The British Journal of Criminology*, 39:2, 287-309.
- Wallerstein I, 2004, *World-systems analysis*, in Modelski G, *World System History*, UNESCO, Oxford.
- Wasserman HM, 2014. *Moral panics and body cameras*, *Washington University Law Review*, 92, 831–843.
- Weick K, 1979, *The Social Psychology of Organising*, Random House, New York.
- Wertsch JV, 1998, *Mind as Action*, OUP, Oxford.
- Wertsch JV, del Rio P and Alvarez A, 1995, *Socio-cultural studies: history, action and mediation*, in Wertsch JV, del Rio P and Alvarez A, *Socio-cultural studies of the mind*, CUP, Cambridge.
- Westmarland L, 2005, *Police Ethics and Integrity: Breaking the Blue Code of Silence*, *Policing and Society*, 15:2, 145-165.
- White MD, Gaub JE and Todak N, 2017, *Exploring the potential for body-worn cameras to reduce violence in police-citizen encounters*, *Policing*, 1:2, 1–11.
- White SO, 1972, *A Perspective on Police Professionalization*, *Law and Society*, October.
- Williamson OE, 1975, *Markets and Hierarchies: Analysis and Antitrust Implications*, Free Press, London.
- Wilson JQ, 1968, *Varieties of police behaviour*, Harvard University Press, Cambridge, MA.
- Wingo NP, Ivankova NV and Moss JA, 2017, *Faculty Perceptions about Teaching Online: Exploring the Literature using the Technology Acceptance Model as an Organising Framework*, *Online Learning*, 21:1, 15-35.
- Woo-Cumings M, 1991, *Race to the Swift: state and finance in Korean Industrialisation*, Columbia University Press, NY.
- Wright JP, Cullen FT and Miller JT, 2009, *Family social capital and delinquent involvement*, *Journal of Criminal Justice*, 29, 1-9.
- WSJ (2017) <http://www.wsj.com/articles/police-cameras-bring-problems-of-their-own-1428612804> (Accessed 28 January 2018)
- Yates A (Ed.), 2016, *Catastrophes, Crashes and Crimes in the UAE*, Medina Publishing, London.
- Yin RK, 2006, *Case Study Methods*, in Green JL, Camilli G and Elmore PB (Eds.), *Handbook of complementary methods in education research*, Mahwah, Lawrence Erlbaum Associates Publishers, NJ, 111-122.
- Young JTN and Ready JT, 2016, *A Longitudinal Analysis of the Relationship between Administrative Policy, Technological Preferences, and Body-Worn Camera Activation among Police Officers*, *Policing*, 1-16.
- Ziemkendorf M, 2007, *Actor-Network Theory, Seminar paper*. Munich: GrinVerlag.

APPENDICES



Centres Support Team

Research, Innovation and Academic
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Research

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7 June 2016

Dear Mohamed,

RE: ETHICS APPLICATION HSCR 16-22 – A Criminological Critique of Body Worn Cameras in Policing: The Case of the United Arab Emirates.

Based on the information you provided, I am pleased to inform you that application HSCR16-22 has been approved.

If there are any changes to the project and/ or its methodology, please inform the Panel as soon as possible by contacting Health-ResearchEthics@salford.ac.uk

Yours sincerely,

Sue McAndrew
Chair of the Research Ethics Panel

Semi-structure Interview Questions

Section one: Roles and responsibilities

1. What is your job title?
2. How long you have been working in the police force?
3. Which department do you belong to?

Section two: Body Worn Camera

4. What is a Body Worn Camera (BWC)?
5. What do you understand about the use of the camera?
6. What type of BWC do you use and how long have you been using the BWC?
7. How would you describe your job before and after using the BWC?
8. What training did you receive to use the BWC?
9. What are the policies for the use of BWC? And do you think that they need to be improved?

Section three: BWC Process

10. Why do officers wear cameras?
11. When will cameras be running? And how will subjects know?

12. Do you have access to the recordings? Can you, for example, delete or modify recordings?
13. Can you recall any incidents where the recording or equipment has failed?
14. Can the subject who has been recorded view the video? How?
15. Do body worn cameras change how you interact with the public? Why?
16. To what extent is the use of BWC in patrolling accepted by the police officers?
17. Are there any limitations in general because of the BWC?
18. How do you think the material captured on the camera will be used?
19. What are the benefits to your role of using a BWC?

Senior officers

1. What are your thoughts about the use of BWCs? (positives/negatives)
2. What training have you received and what training are you providing for the patrol officers?
3. How do you think the BWC footage will be used?
4. What policy documents have been provided to you about the BWC?
5. How do you think the public will receive BWCs?
6. Are you able to review footage, who does this and under what circumstances would they be looking at the footage?
7. Where can I find out more about A/D police services BWC program?

Court staff

1. How the police's body-worn camera technology is changing the justice system?
2. In what ways do the courts currently use BWC footage?
3. Are the courts set up to receive the footage or are there any technical issues?
4. How does it impact on your day-to-day work, if at all?
5. Are there any policy documents produced or available for you about the use of BWC obtained evidence?
6. Are there rules on disclosure, in terms of whether the defence can request BWC footage ahead of a trial?

IT Department

1. What BWC system is Abu Dhabi / Dubai police services using?
2. How many cameras have A/D police deployed?
3. What are the technical challenges to using BWC?
4. Can you access live footage or only downloads?
5. Do you have the capacity to hold all the footage and for what period?
6. What challenges do BWCs present to your role?

Thank you for taking time to conduct this interview with me.

Participant Invitation Letter

Dear Sir/Madam,

I am a PhD candidate in the School of Nursing, Midwifery, Social Work & Social Sciences at the University of Salford, Manchester – UK. The research I wish to conduct for my Doctoral thesis aims at assessing the importance of Body Worn Cameras (BWCs) in ensuring officer safety, judicial proceedings, and professionalism on capturing the qualitative experiences of police BWCs in the UAE. The project is an independent academic study. The findings of the study will be used to gain a better understanding on how we can benefit from implementing the BWC in UAE policing. You are an important person; I am interested in your knowledge and experience in the use of BWCs as part of your police patrolling duties. I believe you will add a lot to this research by providing your experience and perspectives.

Participation in this study is voluntary. It will involve an interview of approximately between 30 to 60 minutes. I am hereby seeking your consent to be part of this project... You have the right to withdraw from this project at any time without explanation. In addition, I can promise you that all collected data will be confidential and therefore will not contain any personal information under any circumstances without your prior consent. The project has received ethical approval from the University of Salford. I very much look forward to speaking with you and thank you in advance for your assistance in this project.

Sincerely,

Participant Information Sheet

STUDY TITLE:

A Criminological Critique of Body Worn Cameras in Policing the Case of the United Arab Emirates.

INFORMATION ABOUT THIS DOCUMENT:

This document gives you important information about the purpose, risks, and benefits of participating in the study. Please take time to read the following information carefully. If you have any questions then feel free to contact the researcher whose details are given at the end of the document. Take time to decide whether or not you wish to take part.

PURPOSE OF THE STUDY:

The research aims at assessing the importance of Body Worn Cameras (BWCs) in ensuring officer safety, judicial proceedings, and professionalism on capturing the qualitative experiences of police BWCs in the UAE. The technology and occupational aspects involved in the BWCs process are part of the research focus to determine the nature of these relationships. The research also aims to create a comprehensive review of the reception of BWCs since its recent implementation in the systems and determine how police officers have adapted to this new technology. The research will use observations and interviews. The research engages with police officers as respondents to offer their insight on the impact BWCs on their working role and interaction with others.

Why have I been invited to take part?

This study is about measuring the importance of Body Worn Cameras (BWCs) ensuring officer safety, judicial proceedings, and professionalism on capturing the qualitative experiences of police BWCs in the UAE and to engages with police officers as respondents to offer their insight on the impact BWCs on their working role and interaction with others. Taking part will be a valuable asset for this study since it's about your work as a man of law using this technology.

What will happen to me if I participate in this study?

If you decide that you would like to take part in the study, please contact the researcher on the numbers at the end of this information leaflet. The researcher will contact you to ask you a few questions to confirm that you are suitable for the study and answer any further questions you may have.

RISKS & POTENTIAL BENEFITS OF THE STUDY:

What risks are involved in participating in the study?

This is a very simple, straight forward study with negligible risks, since you are already doing your own job and whether there is any danger or risk to the researcher as a result of being in patrol with police officers when observing:

The researcher already a warranted officer with 15 years of experience and he is consulting professionals rather than a general public member.

What benefits are involved in participating in the study?

There are no immediate benefits to you of participating in the study. However, the results will help in understanding the effect of BWCs on policemen. This could ultimately help to develop effective policies and rules for BWCs to gain the utmost benefit from adapting it.

PARTICIPANTS' RIGHTS:

Participation in this study is entirely voluntary and you may withdraw from the study at any point. If you have a concern about any aspect of this study you can contact the researcher on the contact information below. The researcher will do his best to answer any questions and clarify any concerns before you agree to participate. You will be asked to sign a consent form to confirm that you agree to take part in the interview or be observed whilst on duty. The interview will last approximately between 30-60 minutes.

ENDING THE STUDY:

What if I want to leave the study early?

You can withdraw from this study at any time without explanation. You have the right to ask that any data you have supplied can be withdrawn or destroyed. You have the right to ignore or refuse to answer or respond to any question that is asked to you. You have the right to have your questions about the procedures answered.

FINANCIAL INFORMATION:

Who is organizing and funding the research?

This study is fully organized and funded by the Police Science Academy, Sharjah Government and under University of Salford supervision.

Will I be paid for participating?

No disbursements will occur due to the shortage of funds and the researcher will rely on the willingness of respondents to participate.

CONFIDENTIALITY OF SUBJECT RECORDS:

All information which is collected about you during the course of the research will be kept strictly confidential, and any information about your name and collar number will be removed so that you cannot be recognised. If you withdraw from the study the researcher will destroy all of your audio- recorded interviews or observations.

USE OF THE DATA:

The data collected as part of this study will be used to understand the effect of BWCs and this will be published both in a Ph.D. thesis and also in scientific journal papers.

CONTACT INFORMATION:

If you require more information about the study, want to participate, or if you are already participating and want to withdraw, please contact:

Email:

Phone:

Thank you very much for taking time to read this document!

We appreciate your interest in this study and hope to take apart.

Research Participant Consent Form

Title of Project: A Criminological Critique of Body Worn Cameras in Policing the Case of the United Arab Emirates.

Ethics Ref No:

Name of Researcher:

(Please initial

box)

- I confirm that I have read and understood the project information sheet titled and what my contribution will be.

- I have been given the opportunity to ask questions (face to face, via telephone and e-mail)

- I agree to take part in the project. Taking part in the project will include being interviewed and recorded (audio or video).

- I understand that my participation is voluntary and that I can withdraw from the research at any time **without giving any reason**

- I understand how the researcher will use my responses, who will see them and how the data will be stored.

- **I agree to take part in the above study**

Name of participant

Signature

Date

Name of researcher taking consent:

Researcher's e-mail address :

Research Participant Consent Form

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- I understand how the researcher will use my responses, who will see them and how the data will be stored.

- **I agree to take part in the above study**

Name of participant

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Signature

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Date

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Name of researcher taking
consent

Researcher's e-mail address :