Do the Citizens of Europe Trust Their Police?

Harry Barton
*Nottingham Trent University,
Nottingham, UK*
&
Malcolm J. Beynon
Cardiff University, UK

Abstract

Purpose - The maintenance of public order and the control of crime are clearly amongst the primary objectives of global law enforcement agencies. An important antecedent to this is the consideration of public trust in their police force. The purpose of this paper is to utilise data from the 5th Round European Social Survey (ESS), to investigate how public social indicators may highlight the level of trust in a country's police force.

Design/methodology/approach – The results from the ESS are analysed using fuzzy-set Qualitative Comparative Analysis (fsQCA), multiply conjunctional causal configurations of the considered social indicators are then established and analysed.

Findings - A consequence of using fsQCA, asymmetric causal configurations are identified for the relative high and low limiting levels of trust towards the police in the considered countries. The results offer novel insights into the relationship between social indicators and police trust, as well as expositing a nascent technique (fsQCA) that may offer future potential in this area.

Originality/value – This paper introduces a novel technique to analyse a major European data set relating to citizens perceptions of the police. The findings might prove useful for policing organisations as they develop strategies to maintain/improve the level of trust and confidence of citizens in the policing services they provide.

Keywords - Police, trust, fuzzy QCA, country

Paper type - Research paper

Introduction

The maintenance of public order and the control of crime are clearly amongst the primary objectives of global law enforcement agencies, and are in the main the responsibility of a country's police service. In order to be effective in such a role the police need to understand why people obey the law and cooperate with legal authorities. If crime policies are to succeed they need to resonate with people's sense of morality and nationality (Schulhofer *et al*., 2011). To illustrate, considered in this paper, there has been interest is the notion of public trust in a country's police force (Wu and Sun, 2009; Hohl *et al*., 2010; Jackson *et al*., 2011; Kääriäinen and Sirén, 2011).

The degree of public trust in a country's police service will have an impact on the level of resources required for the maintenance of public order and their ability to prevent crime and detect offenders. The degree to which the public trust police clearly varies across countries (Jackson, 2012), although the reasons for this are not straightforward. Within some countries there appears to be a decline in public trust, and as a result, such countries are experiencing increases on the demand for policing services at a time when governments are under pressure to reduce the cost of public services. Many national policing organisations therefore face the dual challenge of reducing costs whilst at the same time maintaining levels of public confidence and trust in the services they provide (Larsen and Blair, 2009; Bradford, 2011; Jackson, 2012).

Such services are shaped to respond to, and reflect, the prevailing attitudes and concerns of citizens within democratic societies. 'They are difficult to measure, are often unexpressed, and cannot be inferred through electoral choices alone. Nor can they be gleaned from media opinion polls which tend to give momentary and incomplete glimpses of attitude formation and change.' (Fitzgerald, 2012, p. 2). Notwithstanding such difficulties however, to succeed, systems of law and systems of justice need to skilfully promote self-regulation

and pro-social behaviour (Jackson *et al*., 2011). This element of regulation and audit of the police has been emphasised through the election in 2012 of police and crime commissioners in England and Wales in direct response to calls from both the public and politicians for more democratic control of the police (Raine and Keasey, 2012).

As referred to earlier, one area of interest has been in the elucidation of understanding the notion of trust in police. Jackson *et al*. (2011) attempt to clarify what trust in the police is, explaining things from the perspectives of the public and police. Hohl *et al*. (2010) expresses the idea that trust underlies, and in part, helps constitute the legitimacy of the police. In this study, an exploratory investigation is made into expositing the different levels of trust towards countries' police forces, by the respective public, based on certain social indicators, including perceived public effectiveness of the police, for example.

The analysis part of this paper uses the nascent fuzzy-set Qualitative Comparative Analysis (fsQCA) technique, introduced in Ragin (2000; 2008), which offers a set-theoretical approach to analysis. Thus with the 20 countries from the 2010 ESS survey being considered in this paper, fsQCA advantageously allows rigorous analysis when there is a relatively small sample considered (see Ragin, 2000). As a development on the original QCA (Ragin, 1987), fsQCA broadens the previous dichotomous/binary valued based analysis to that of values over 0 to 1 domains, thus the intended partial membership approach moves the analysis away from the extremes and is inclusive of cases 'in between' (see Greckhamer, 2011), pertinent here for the considered continuous-scaled indicator variables. With the rudiments of fsQCA set-theoretical, causal understanding becomes multiply conjunctional, in that causes may operate in combination and multiple combinations of causes may produce the same outcome.

In order to investigate this police trust problem, this study draws upon data and documentation from The European Social Survey (www.europeansocialsurvey.org). Specifically, therefore, the analysis of the cross-country data sets identifies certain factors

that link people's perceptions of police legitimacy to their compliance with the law and their willingness to trust and cooperate with the police. This is important, as a greater understanding could lead to the development and implementation of more effective law and order policies. Through an initial exploratory factor analysis, five public 'trust' oriented social indicators (factors) are identified, termed here, Compliant, Security, Cooperation, Effectiveness and Fairness. These 'social' indicators, reflecting public perceptions towards the police in a country, are considered against the outcome variable of the levels of trust the public in the countries have towards their police.

The results presented in this paper offer insights into the applicability of fsQCA for the first time in this research area. These include the grouping of the countries in terms of their similarity with the considered public social indicators, as well as their association to the established causal configurations of social indicators identified in terms of high or low levels of trust in the police. With the set-theoretical based constructed causal configurations presented showing the clear relationship between public social indicators and police trust, potential policy implications are exposed. As such, the findings are of interest to researchers and practitioners in this area and will add to a growing interest in the application of both novel and conventional mathematical modelling techniques within the field of emergency services management (Barton and Beynon, 2012; Cruddas, 2013).

Factors that influence trust in the police

Findings from the fifth European Social Survey (ESS) on public trust in justice (Jackson *et al*., 2011) were used to test an elaborated version of Tyler's (2006) procedural justice theory. This posits that fair treatment by police and representatives of other justice agencies yields public trust in justice, which in turn consolidates the legitimacy of institutions of justice, and thus public cooperation and compliance with the law (Hough *et al*., 2010). The confirmatory

analysis (Jackson *et al*., 2011), showed good support across a variety of European countries on the link between trust in the police and public's perceptions of the legitimacy of police (Hough *et al*., 2010).

In an unrelated study on public confidence across European countries, Markov (2009) evidenced that public confidence is an important factor when designing and implementing criminal justice policies. This is important for policy makers, as the success or failure of such policy initiatives are clearly influenced by public perception of the legitimacy (trust and confidence) in those policies and the rationale behind them.

Such findings have an underpinning assumption that directly correlates trust and confidence to legitimacy of the police (service) force (Sunshine and Tyler, 2003). Such research evidence demonstrates the complexity around legitimacy; bringing in subtle differences between confidence and trust. Legitimacy is the right to govern and the recognition by the governed of this right (Beetham, 1991; Coicaud, 2002). Tyler (2001), interprets legitimacy as; obligation to obey authorities, and is an emergent property of individuals subject to specific social arrangements; a psychological property of authority, which leads those connected to it to believe that it is appropriate, proper, and just.

Bradford *et al*. (2009a, 2009b) argue that from a citizen perspective conferred legitimacy is through expressed consent (the right to expect obedience), and shared beliefs (justified power via moral authority: normative justifiability of power). The evidence to improve legitimacy (by implication trust and confidence in the police), suggests policing must be seen to typify group morals and public values (Moore, 1995; Jackson and Sunshine, 2007; Skidmore, 2006). So legitimacy should be both citizen-conferred and system conferred and public valued based.

Bradford *et al*. (2009c) propose that trust sits above confidence; it sits above actual encounters, whereas confidence may be a more stable evaluation than trust. So if one trusts

the criminal justice system then encounters will be assumed to proceed predictably. This would engender compliance, and cooperation on behalf of the individual Beetham (1991). Bradford *et al.* (2009c) believe confidence is a 'system-level' institutionally based attitude towards activities of the criminal justice system: trust is something you do, confidence is something you have. This is important from a practical perspective, as Hawdon (2008, p. 183) states, 'There is a consensus among researchers that citizen perceptions of police trustworthiness and legitimacy increase the willingness of residents to cooperate with the police and comply with the law (Stoutland, 2001; Sunshine and Tyler, 2003; Tyler and Huo, 2002).'

The above illustrates key distinctions between trust and confidence. From a pragmatic perspective policing has a finite capacity, it needs voluntary cooperation; with the majority of citizens being law-abiding. However, their trust in the police can be influenced by a number of different drivers. For instance, if citizens require assistance from the police to deal with anti-social behaviour or crimes against them and the police respond effectively, then the level of trust in the police increases owing to their ability to meet citizens' expectations. People who were satisfied with the way the police dealt with them had higher odds of trusting the police. Tyler (2006) developed what has become known as the procedural model; treating people with respect and the manner, were the most important factors. Kääriäinen and Sirén (2011) found having positive contact with the police was not itself associated with increased levels of trust. However, if accepting that the police have mandated power to exert authority over citizens and this power was yielded in an ethical and equitable way, then the likelihood would be that trust in the police would be maintained or increased.

Such assumptions however have to be moderated in the context of the cross-cultural nature of the ESS. All the nations involved in the study have their own unique set of deep-

lying beliefs and values, and these are reflected in the ways that their societies operate. An awareness of these cultural differences is therefore important in terms of an analysis of the results of any cross-national survey. This has been emphasised over the many years through the classic research conducted by European researchers, such as Laurent (1983, 1986), who made a distinction between what he described as 'high context' and 'low context' cultures. This is a multi-faceted concept, but at its heart is an understanding that all cultures can be situated in relation to one another through the styles in which they communicate (Kittler *et al.*, 2011).

Hofstede (1980, 2001) meanwhile conducted influential research in relation to national cultures in which he provides a framework integrating four factors to explain national differences: power distance; uncertainty avoidance; individualism and masculinity. Arguably the most well- known of these factors, power distance, relates to the extent to which societies accept that power in institutions such as the police should be distributed unequally. In organisational terms this relates to the centralisation of authority and the degree of autocratic leadership. Societies with 'high power' distance scores are reflected in hierarchical organisations where it is felt to be right that the superior is seen to be more powerful than subordinates, Hofstede (2001) identifies France as being one such nation. This is in contrast with lower power distance scores achieved by a nation such as Britain and the Scandinavian countries, who favour a more democratic style of organisation. Thus one might anticipate within the ESS survey that there might be noticeable differences in participant responses between France and Britain, for example (see results).

Data Description, Methodology and Data Pre-Processing

This section outlines the data and methodology considered in this paper.

Data

The main data source for this analysis is the fifth round of the European Social Survey (ESS), conducted in 2010. The ESS is a well-known international large-scale quantitative survey that has been repeated every two years since 2002, generally including between 20 and 30 European countries. Of the 2010 wave, data on 20 European countries became available in October 2011. In each country, methodology is documented in a detailed fashion, and much effort has been put in ensuring sample representativeness of the population. This most recent wave of the survey is particularly fit for present study due to the inclusion of a special module related to attitudes towards the police, justice and safety (Jackson *et al.*, 2011). Its three aims are, *i*) To monitor and interpret changing public attitudes and values within Europe, *ii*) To advance and consolidate improved methods of cross-national survey measurement in Europe and beyond, and *iii*) to develop a series of European social indicators, including attitudinal indicators.

In this study survey questions associated with potential social indicators were considered. An exploratory factor analysis was undertaken to identify associated factors (Hair *et al.*, 2010), details of this analysis are presented in Appendix A. It is noted, the final factor analysis results shown, do not include survey questions and identified factors that were deleted due to not satisfying criteria set down when identifying factors, including that each identified factor has an associated Cronbach alpha reliability score above the accepted threshold of 0.7 (see Hair *et al.*, 2010).

From the considered questions from the police data set (see Appendix A), five factors were identified describing people-attitudes to aspects of police in the 20 considered countries. The respective factors are next briefly described:

Factor 1 - Compliant (the higher the value the more compliant the public)

Made up of questions relating to public duty, including 'Duty to: do what police say, even when don't understand or agree' and 'Duty to: do what police say even if treated badly'. This is secured by the presence of formal or informal mechanisms of social control, as well as the existence of severe sanctions for wrong doers or for dissent. This implies that there is a tacit acceptance amongst the majority of the population that the police have a mandated, legal duty to protect and assist the public. In order to achieve this there is an implied acceptance by the public of the need to the directions of the police and to obey the law.

Factor 2 - Security (the higher the value more security expressed by the public)

Made up of questions relating to public concerns on crime, including 'Worry about home burgled has effect on quality of life' and 'Worry about becoming victim of violent crime has effect on quality of life'. Fear of crime may inhibit people's willingness to cooperate and support the police and legal system, as they feel intimidated and/or fear reprisal. If the population, in general, perceive the police have the ability to protect them and their property from criminal acts and can respond in sufficient time to detect offenders then levels of security will increase.

Factor 3 - Cooperative (the higher the value the more cooperative are the public)

Made up of questions relating to public cooperation with police, including 'How willing to identify person who had done it' and 'How willing to give evidence in court against the accused'. Cooperation between members of the public and the police is vital for the effective functioning of police services and for the control of crime. Such cooperation is most often based on the historical relationships built up within communities and the local police. Where this relationship is strong, and non-adversarial, the greater the likelihood of cooperation as a mechanism for maintaining stable community relations.

Factor 4 - Effectiveness (the higher the value more perceived effectiveness of the police)

Made up of questions relating to public perceptions of police effectiveness, including 'How likely to be caught if bought something that might be stolen' and 'How likely be caught if made exaggerated or false insurance claim'. The perceived effectiveness of the police at fighting crime and supporting victims and witnesses may be a theoretically important predictor of trust and legitimacy in the police, which encourages a cooperative attitude towards law and order maintenance.

Factor 5 - Fairness (the higher the value more perceived fairness of the police)

Made up of questions relating to public perceptions of police interaction, including 'How often do police make fair, impartial decisions' and 'How often do police treat people in country with respect'. A legitimate authority has the right to exercise power; it commands consent (a sense of obligation to obey) that is grounded in legality and moral alignment. The behaviour of police officers to act impartially, ethically and understanding the concept of equality has important ramifications for citizens' perceptions of a police officer's fairness.

From the descriptions of these five factors, they resemble social indicators as described in Hohl *et al*. (2010) and Jackson *et al*. (2011), and therefore reflect a consistency in approach to analysing large scale social survey data. The actual values representing these social indicators (factors) are shown in Table A4.

The considered outcome in this study is police trust, as described in Appendix A, this question is based on a 11-point scale ranging from no trust at all (0) upto complete trust (10), see Table A4.

Methodology

The family of developed techniques associated with qualitative comparative analysis (QCA) has its origins with the early work of Charles C. Ragin, from the late 1980s (see for example, Ragin, 1987; 2008). Inspection of the COMPASS website, dedicated to QCA and associated techniques, illustrates there is an increasing employment of QCA techniques, including fuzzy-set QCA (fsQCA), the technique employed in this paper. Whereas QCA considers the analysis of variables each representing either the presence/absence of a condition (here in respect of the social indicators previously found), fsQCA can be used when the degree to which conditions are present or absent is known (Ragin, 2008).

Data Pre-Processing

Using fsQCA, a level of pre-processing is undertaken, to formulise the values across each variable (the constructed social indicators and outcome variables), through to fuzzy membership scores over the 0 to 1 continuous scale (Ragin 2008). Fuzzy membership scores, over this continuous scale, address the varying degree to which different cases (countries) belong to a set (including the two qualitative states, full membership (1) and full non-membership (0)), not how cases rank relative to each other on a single dimension of open-ended variation (Ragin 2005). Ragin (2007) formulated an approach for this recoding of variables, which they considered tied in with the expectations of fsQCA, termed the direct method coding approach, constructing fuzzy membership scores for variables for each case (the continuous fuzzy set), employed here.

The direct method focuses on the three qualitative anchors that structure the degree of membership to the focus set (here trust levels of public to their respective country's police force). These are: (1) the threshold for full non-membership; (2) the threshold for full membership and; (3) the cross-over point, where there is some ambiguity about membership.

(how the three qualitative anchors and subsequent membership values were constructed here is described in Appendix B, see also Greckhamer, 2011; Andrews *et al*., 2012; 2015). Figure 1 presents a graphical overview of the membership scores for all the condition and outcome variables.

Figure 1. Membership functions μ_i (with evaluated fsQCA 'direct method' parameter values) for the variables Compliant, Security, Cooperative, Effective and Fairness, and outcome Trust.
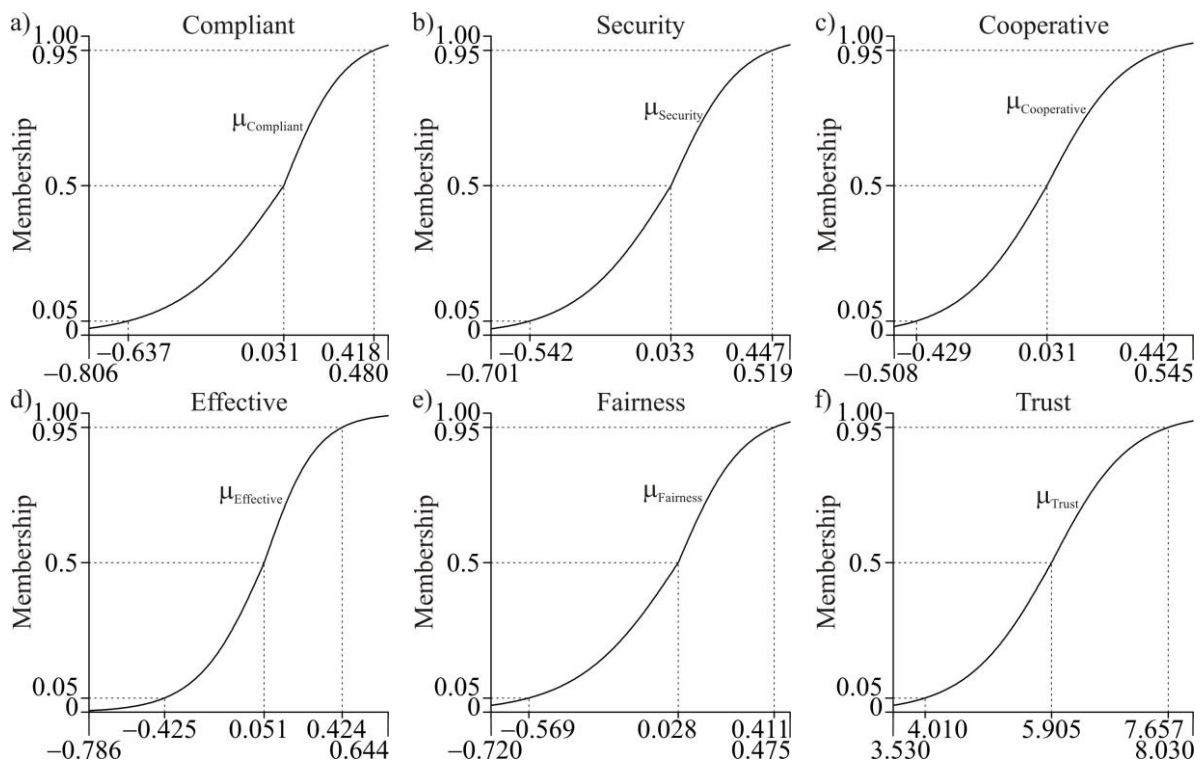
Each of the graphs in Figure 1 is used to represent the degree of membership of that variable for a specific country (referring back also to the brief descriptions of each variables previously given). As referred to earlier, a membership score is with respect to a set, thus, fuzzy sets combine qualitative and quantitative assessment: 1 and 0 are qualitative assignments ("fully in" and "fully out", respectively); values between 0 and 1 indicate partial membership.

FsQCA Analysis

The two fsQCA based analyses undertaken in this paper (using fs/QCA Version 2.5, Ragin and Davey, 2014), following Andrews *et al*. (2012; 2015), revolve around the two different directions associated with the outcome variable Trust (of the police in the 20 European countries considered), namely High (termed H-Trust) and Low (L-Trust) trust levels (a feature of the asymmetric forms of analysis possible using fsQCA).[i]

The consideration of causal configurations of social indicators (Compliant, Security, Cooperative, Effective and Fairness) and the outcome (H-Trust or L-Trust), is here elucidated through truth tables (see Ragin *et al*., 2008). The truth table represents logically possible combinations of included conditions and is the key tool of this set-theoretic analysis (Ragin, 1987; Ragin *et al*., 2008). In Tables 1 and 2, the associated truth tables are shown including logically possible combinations of conditions with strong membership to the respective outcome, H-Trust (Table 1) and L-Trust (Table 2).[ii] The motivation for considering both of these outcomes, is the potential for elucidating causal asymmetry with fsQCA, and therefore, should be considered separately (Greckhamer, 2011).

The important point to reiterate here is that the rows in the each truth table, in Tables 1 and 2, are not specifically representing individual cases (countries), but the logical configurations for which there were 'strong membership' based associations with (with five conditions considered there are $2^5 = 32$ logical configurations, in Tables 1 and 2 the same 14 logical configurations are shown for which at least one case is strongly associated with each of them).

Table 1. Truth table for configurations when considering H-Trust outcome

Configuration	Compliant	Security	Cooperative	Effective	Fairness	H-Trust	Number	Raw Consistency
13	1	1	1	0	1	1	5	0.992
14	1	1	1	1	1	1	2	0.990
6	0	0	1	1	1	1	1	0.974
3	0	0	0	1	1	1	1	0.970
8	0	1	1	1	1	1	1	0.944
4	0	0	1	0	1	0	1	0.936
5	0	0	1	1	0	0	1	0.861
7	0	1	0	1	1	0	1	0.855
11	1	1	0	0	0	0	1	0.819
12	1	1	0	1	0	0	1	0.730
2	0	0	0	1	0	0	1	0.721
9	1	0	0	0	0	0	1	0.709
1	0	0	0	0	0	0	2	0.665
10	1	0	0	1	0	0	1	0.664

Table 2. Truth table for configurations when considering L-Trust outcome

Configuration	Compliant	Security	Cooperative	Effective	Fairness	L-Trust	Number	Raw Consistency
1	0	0	0	0	0	1	2	0.996
2	0	0	0	1	0	1	1	0.994
9	1	0	0	0	0	1	1	0.990
10	1	0	0	1	0	1	1	0.990
5	0	0	1	1	0	1	1	0.987
7	0	1	0	1	1	1	1	0.966
12	1	1	0	1	0	1	1	0.950
11	1	1	0	0	0	0	1	0.939
4	0	0	1	0	1	0	1	0.923
6	0	0	1	1	1	0	1	0.903
3	0	0	0	1	1	0	1	0.888
8	0	1	1	1	1	0	1	0.846
14	1	1	1	1	1	0	2	0.590
13	1	1	1	0	1	0	5	0.469

With the truth tables constructed, the decision on which configurations are considered strongly associated with high trust (1s in H-Trust column in Table 1) and low trust (1s in L-Trust column in Table 2), is based on consideration of the respective raw consistency values (see relevant columns in Tables 1 and 2). A raw consistency value measures the proportion of memberships, in fuzzy terms, in the outcome explained by each logical configuration (see Ragin (2008), for a description of this values technical evaluation). This decision is incumbent on a choice of a threshold value for this raw consistency value, to effect those configurations considered and not considered strongly associated with a respective outcome

(Ragin, 2006). In this study, for both truth tables shown in Tables 1 and 2, a threshold value of 0.94 was utilised in discerning between those configurations, a value above the often considered acceptable threshold value of 0.8 (see Ragin, 2005; Fiss, 2011). [iii]

Next we consider the causal configurations most linked with the H-Trust or L-Trust outcomes, seeing what combinations of social indicators discern those configurations, as presented in Tables 1 and 2. This requires consideration of the inclusion or exclusion of those configurations of social indicators not included in the respective truth tables, termed remainders (for which there were no cases with strong membership to them). Within this study, being exploratory in nature, the 'complex' (derived without the use of remainders) and 'parsimonious' (derived with the use of remainders) solutions are considered. This approach is advocated by Wagemann and Schneider (2010), who state that both the complex and parsimonious solutions should be exposited in a fsQCA analysis (see also Vis, 2009). [iv]

Table 3 summarizes the complex and parsimonious solutions associated with the H-Trust and L-Trust outcomes, following the notation prescribed in Ragin and Fiss (2008). This notation presents the complex and parsimonious solutions, in a way that differentiates core versus peripheral causal social indicators (*ibid.*). This table also reports the consistency, raw coverage, and unique coverage calculations,[v] as well as the previously defined solution consistency and solution coverage.

Table 3. Sufficiency analyses results for H-Trust and L-Trust outcomes (including complex and parsimonious solutions)

	H-Trust			L-Trust			
Compliant	⊖	●		⊖	●	⊖	
Security	⊖	●	●	●		⊖	⊖
Cooperative		●	●	⊖	⊖		⊖
Effective	●		●	●	●	●	
Fairness	●	●	●	●	⊖	⊖	⊖
Complex Solution	**CO1**	**CO2**	**CO3**	**CN1**	**CN2**	**CN3**	**CN4**
Configurations	**7, 8**	**3, 5, 6, 9, 14, 15**	**3, 5, 11**	**20**	**12, 16**	**2, 10**	**2, 12, 13, 17, 18**
Consistency	0.978	0.993	0.961	0.966	0.960	0.989	0.986
Raw Coverage	0.373	0.588	0.478	0.292	0.386	0.368	0.549
Unique Coverage	0.102	0.164	0.028	0.067	0l.081	0.076	0.152
Solution Consistency	0.970			0.969			
Solution Coverage	0.744			0.788			
Parsimonious Solution	**PO1**	**PO2**		**PN1**	**PN2**		
Configurations	**7, 8**	**3, 5, 6, 9, 11, 14, 15, 19**		**16, 20**	**2, 10, 12, 13, 17, 18**		
Consistency	0.964	0.970		0.839	0.951		
Raw Coverage	0.423	0.649		0.415	0.646		
Unique Coverage	0.107	0.332		0.159	0.390		
Solution Consistency	0.958			0.880			
Solution Coverage	0.755			0.805			

Each column in the top part of Table 3 represents a configuration of social indicators linked to the respective outcomes. Full circles (●) indicate the presence of a social indicator, while barred circles (⊖) indicate a social indicator's absence. Further, core and peripheral social indicators are distinguished by symbols' size: larger circles indicate core social indicators that are part of both parsimonious and complex solutions (see Ragin and Fiss, 2008). Smaller circles indicate peripheral social indicators that only occur in complex solutions. Each panel represents the alternative causal combinations or recipes for the outcome (Ragin, 2008). These are consecutively numbered, CO1, CO2, etc. and CN1, CN2, etc., for when referring to the outcome (H-Trust) or not-outcome (L-Trust), respectively for the complex solutions, then PO1 and PO2, and PN1 and PN2 for the parsimonious solutions.

In the middle part of the table, the associated, consistency, raw coverage, unique coverage, solution consistency and solution coverage values are given for the complex

solutions. In brief, following Greckhamer (2011), consistency measures the degree to which cases sharing a given social indicator agree in displaying an outcome. Raw coverage measures the overall coverage of a combination that may overlap with other combinations. Unique coverage refers to coverage uniquely due to a combination. Solution consistency measures the degree to which membership in the solution (the set of solution terms) is a subset of membership in the outcome. Lastly solution coverage refers to the combined coverage of all combinations leading to the outcome (see also Ragin *et al*., 2008). The bottom part of the table offers similar information but based on the parsimonious solutions.

The identification of different combinations of social indicators for when considering either H-Trust or L-Trust, demonstrates the multiply conjunctional and asymmetric causal nature of this problem, both features that the use of fsQCA is able to exposit. For example, considering the complex solutions, there are three (CO1, CO2 and CO3) and four (CN1, CN2, CN3 and CN4) combinations of configurations associated with H-Trust and L-Trust, respectively, indicating the multiply conjunctional nature of this problem. Also, for the separate outcomes H-Trust or L-Trust, and considering the parsimonious solutions, there are two different sets of core characteristics identified (large ● and ⊖), which demonstrates the asymmetric causal nature of this problem. Interpretive details on these results are described in the next section, with particular attention to the parsimonious solution.

Discussion

Contact and overall communication between the police and the public has a pivotal role in the context of trust as it provides opportunities to reinforce or diminish stereotypical perceptions concerning police performance. Variation between countries introduces further complexity to the experience and evaluations of the police by respondents existing within different cultural contexts and settings. The influence of environmental factors such as different

institutional and legal systems will also affect what is allowed, and what is not allowed, within different nations and will influence respondents' levels of trust in the police. One would therefore anticipate a difference in response from participants in the ESS survey from more liberal nations in Western Europe such as Britain, Germany and the Scandinavian countries, compared to the post- Soviet nations of Russia, Bulgaria and Hungary (see Table 4).

From a theoretical perspective, procedural justice theories are especially useful in making sense of issues around trust in the police, beliefs about police legitimacy and public compliance and cooperation with the law (Hough and Sato, 2011: p. 10). The procedural justice model proposed by Sunshine and Tyler (2003), recommends that the treatment considered fair and equitable by the public is most likely to result in an increase in trust and confidence. Also, people's judgement on everyday performance of police within their communities, are not just focused on being able to solve crime or prevent disorder, but the quality of personal contact.

In a similar vein, Whiteley (2000) argues that high political and social trust has a positive impact on increasing levels of confidence in the police. Other procedural justice theorists, such as Tyler (2011), also argue that motive-based, voluntary self-regulation based on perceptions of legitimacy of the law is more effective in increasing citizens' trust in the police over strategies of instrumental control which are ineffective and costly. However, such propositions will be influenced by cultural, historical and societal influences that are country specific and have an impact on individual citizens' general values which account for differences in engagement and overall trust in their police services.

In order to further explore such influences on police trust in different country settings this discussion offers further elucidation to the findings from the fsQCA analyses undertaken. Here the results from the parsimonious solutions are considered. From Table 3, there are two

paths associated with both the outcomes, H-Trust and L-Trust, namely PO1 and PO2, and PN1 and PN2, next described.

High trust (H-Trust):

PO1: Described by low Security, high Effectiveness and high Fairness, associated with CO1.

PO2: Described by high Security and high Cooperation, associated with CO2 and CO3.

Low trust (L-Trust):

PN1: Described by high Security, low Cooperation and high Effectiveness, associated with CN1 and partially CN2.

PN2: Described by low Security and low Fairness, associated with CN3 and CN4 and partially CN2.

To further elucidate these causal paths the associated countries strongly associated with these causal paths are given in Table 4.

Inspection of Table 4 identifies that there are two major groupings of countries contained within this analysis, one each associated with the H-Trust (PO2) and L-Trust (PN2) outcomes. The presence of the smaller groupings (PO1 and PN1) is interesting in that is demonstrates the ability of fsQCA (with two separate analyses undertaken here) to identify multiple causal paths to the same outcome.

Table 4. Truth table for logical configurations when considering H-Trust and L-Trust outcomes

Outcome	Countries
H-Trust PO1	Estonia, Spain
H-Trust PO2	Switzerland, Germany, Denmark, Finland, United Kingdom, Netherlands, Norway, Sweden
L-Trust PN1	Poland, Slovenia
L-Trust PN2	Bulgaria, France, Hungary, Israel, Portugal, Russian Federation

For the H-Trust outcome the separation of the countries Estonia and Spain from the countries associated with PO2 represents an intriguing situation, where, although there is a high level of trust in the police in terms of their effectiveness and fairness, there is a concomitant feeling of lack of security? These results would appear to be at odds, however a partial explanation may lie in the cultural context in which the respondents from these countries find themselves. Such citizens have in relatively recent times endured authoritarian regimes (Franco/Spain and Soviet Communism/Estonia), which has resulted in a legacy of distrust in both political and social institutions. Within such systems the relationships between crime and 'political economy' may have a long lasting negative impact on their feeling of security, which can be traced back to the connections between the social distribution of wealth and attachment to –or detachment from-social norms (Cavadino and Dignan, 2013).

This situation is contrasted to those countries that demonstrate a high degree of openness and transparency in how their police are organised and structured. This may lead to an increase in trust through citizens' having a greater awareness of the purpose of the police, through the publication of policing strategy documents; annual reports and greater media exposure. This is more typical of western countries and is reflected with High trust (H-) outcomes in the data analysis (Switzerland, Germany, Denmark, Finland, United Kingdom, Netherlands, Norway and Sweden). This would appear to be in accord with a European comparative study conducted by Hough et al, (2013) in their study looking at trust in justice and the legitimacy of legal authorities.

This measurement of citizen trust reflects an expressive model of trust proposed by Tyler and Boeckmann (1997), and further developed by Jackson, *et al.* (2009), which suggests that citizens' base their police performance evaluation on the extent to which they believe the police are tackling crime and where they are considered guardians of citizens'

rights and lawful values (Jackson and Sunshine, 2007; Jackson and Bradford, 2008; Jackson *et al*., 2009).

This perspective on measuring citizen trust is one approach which has generated a wide level of agreement amongst both academics and practitioners (Cavadino and Dignan, 2013; Hough et al. 2013). Another approach, which is not considered to widely contradict the assumptions of the expressive model, has been advanced by Sunshine and Tyler (2003). In their instrumental model of trust in police authority, the proposition is that police gain and maintain the support of the citizens through demonstrating a high level of distributive justice (equality of treatment/ fairness) across all communities. Thus high fairness is a strong characteristic of High (H-trust) outcomes.

This is clearly more intensely demonstrated in responses from citizens in Central and Eastern Europe, who report both Low trust (L-Trust), low levels of security and low fairness (PN2) in their policing services (Bulgaria, France, Hungary, Israel, Portugal, Russian Federation). Evidence from the results of the survey might suggest that past legacies of political suppression and a general intolerance to civil protest might have negatively affected citizen's perceptions of the police. This in turn appears to have created a significant alienation and distrust in the minds of citizens' (even given the post-communist era) in the political neutrality of the state run police services.

As an example in Russia, the status of the police is unique as compared to the rest of the world (Schaap, 2012) in a sense that many officers engage in criminal activities and violent behaviour, which leads to absolutely devastating results in terms of public attitudes towards the police (Shlapentokh, 2006). The function of the police also differs from that of most European police forces: public policing is a commodity that can be paid for by private agencies (Favarel-Garrigues and Le Huérou, 2004).

The inclusion however of France, Israel and Portugal within this grouping illustrates the complexity of the relationship between the police, present day political establishment's and citizens' perceptions of this relationship within these western (orientated) countries as compared with other western countries with H-Trust outcomes.

However, higher levels of security are reported from citizens' in Poland and Slovenia compared to the larger group of countries (PN2). But why is the fear of crime less in these countries? One explanation may be that although there is a general lack of trust in the police across both data sets, both the Polish and Slovenian police forces may have initiated crime reduction policies that have reduced the fear of crime within each of their respective countries. This may however be too simplistic an answer and requires more detailed analysis from comparisons with other detailed social surveys conducted over the last few years in theses respective countries (Cavadino and Dignan, 2013; Hough et al. 2013).

Looking across the two outcomes H-Trust and L-Trust, and in particular the countries associated with PO2 and PN2, there appears an almost clear distinction between the west and north European countries associated with H-Trust and the east European countries associated with L-Trust. This is not totally unexpected, Jackson *et al*. (2011) said as such when comparing the United Kingdom and Bulgaria in respect of trust in justice. In broad terms those countries associated with L-Trust also continue to experience high levels of corruption, an ineffective justice system, and high levels of organised crime. Cases of political corruption, flagrant conflicts of interest and the use of public resources for personal benefit continue. This in itself is characterised by high levels of public mistrust in state institutions and therefore by association the police (Jackson *et al*., 2011).

Conclusions

Public trust in a countries criminal justice system is an important indicator of the level of maturity and degree of sophistication of the underlying process of criminal justice. This paper specifically looks at the role of the police within that process while accepting that other agencies i.e. the courts' also have an important influence on the level (high or low) of trust In the main the higher the level of trust the greater the likelihood that the system is working and achieving the objectives for which it was established. This paper has specifically identified five factors that when analysed provide some indication as to whether this is being achieved. The factors considered here within this exploratory analysis of 20 countries are compliance; security, cooperation; effectiveness and fairness.

Through this analysis some interpretation might be possible that could benefit an individual countries approach to the development of for instance, crime-control policies (Jackson *et al*., 2011). From a police perspective this is important as police resources are expensive and need to be effectively deployed. The combination of competence in dealing with incidents and detecting offenders (police effectiveness), wielding authority in a fair way (fairness), facilitating a safe (security) environment in which the public's perception of the fear of crime is low should encourage a positive dialogue (cooperation) between the public and police. In this way, trust is likely to increase and the more likely the public will accept the legal authority imposed on them by the police (compliance).

Analysing the results of these factors from countries that operate within diverse, political and social contexts it should be possible to highlight weaknesses within the police operational procedures that lead to low trust relationships with the public. Clearly, the higher trusting and more accepting of the role of the police the public are, then the less distracted the police need to be in terms of control and surveillance of the general population. Instead, resources can be concentrated on the minority who make a rational choice to live beyond the

law and commit offences. Criminal justice policies can then be orientated towards detecting and ultimately punishing such offenders in a way which has the broad support of the majority of the public. The reality of this is that through the moral cooperation and trust of the public the economics of crime control can at least be brought under control.

With respect to the fsQCA analysis, in technical terms, it is worth noting the most complex and the most parsimonious solutions are the two endpoints of a single complexity/parsimony continuum. Future research in this area should consider possible intermediate solutions, which use only a subset of the simplifying assumptions that are used in the most parsimonious solution (see Ragin and Sonnett, 2004).

At a broader level there are still significant issues to be explored around the extent to which normative systems of social control 'travel' with people as they move beyond their own countries and cultures (Hough and Maffei, 2013). Future comparative studies should ensure that the influence of migration and its impact on the outcome of social surveys are recognised within any technical modelling exercises as interpretation of the data might be unduly biased.

Appendix A (Exploratory factor analysis of ESS data set)

This section outlines the factor analysis investigation of the considered ESS data set, in terms of our goal of considering the relationship with the public and police, more to the point trust in the police.

Preliminary analyses were undertaken on all survey questions which were considered to be associated with the topic of this research, with 40 questions initially spread over 10 identified factors. Following the exploratory factor analysis approach, as prescribed in Hair *et al.* (2010), and in particular adhering to the acceptance of factors which have Cronbach alpha reliability scores above the threshold 0.7, the final considered survey questions are shown in Table A1.

Table A1. Original questions considered

Description	Scale
How often worry about your home being burgled	All or most of the time / Never (1-4)
Worry about home burgled has effect on quality of life	Serious effect / No real effect (1-3)
How often worry about becoming a victim of violent crime	All or most of the time / Never (1-4)
Worry about becoming victim of violent crime has effect on quality of life	Serious effect / No real effect (1-3)
How likely be caught if made exaggerated or false insurance claim	Not at all likely / Very likely (1-4)
How likely to be caught if bought something that might be stolen	Not at all likely / Very likely (1-4)
How likely to be caught if committed traffic offence	Not at all likely / Very likely (1-4)
How often do police treat people in country with respect	Not at all often / Very often (1-4)
How often do police make fair, impartial decisions	Not at all often / Very often (1-4)
How often do the police explain their decisions and actions when asked	Not at all often / Very often (1-4)
Duty to: back decisions made by police, even if disagree	Not-at-all / Completely (1-10)
Duty to: do what police say, even when don't understand or agree	Not-at-all / Completely (1-10)
Duty to: do what police say even if treated badly	Not-at-all / Completely (1-10)
How likely to call police if you see a man get his wallet stolen	Not at all likely / Very likely (1-4)
How willing to identify person who had done it	Not at all likely / Very likely (1-4)
How willing to give evidence in court against the accused	Not at all likely / Very likely (1-4)
Trust in the police	Not-Trust-at-all / Complete-Trust (0-10)

Inspection of the questions considered shows they concern various aspects of the relationship between a country's people and their police. Also shown are the different scales associated with the individual questions. To be able to consider then together, a principal component factor analysis was undertaken on the 16 descriptive variables, see Table A1 (not including the outcome variable Trust). Factors were formed with varimax rotation to assess the dimensionality of the sets of items. The analysis found five factors covering the sets of items, satisfying the selection criterion of eigenvalues > 1.0, see Tables A2 and A3.

Table A2. Total Variance Explained

Component	Initial Eigenvalues			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.349	20.932	20.932	2.387	14.920	14.920
2	2.312	14.447	35.379	2.334	14.588	29.508
3	2.016	12.602	47.981	2.226	13.910	43.418
4	1.991	12.441	60.423	2.143	13.391	56.809
5	1.402	8.760	69.183	1.980	12.374	69.183
6	0.802	5.011	74.193			

Extraction Method: Principal Component Analysis.

Table A3. Rotated Component Matrix

Items	Component				
	1	2	3	4	5
How often worry about your home being burgled	.033	**.709**	-.082	-.057	.012
Worry about home burgled has effect on quality of life	.052	**.804**	.079	.006	.056
How often worry about becoming a victim of violent crime	.031	**.744**	-.028	-.010	.025
Worry about becoming victim of violent crime has effect on quality of life	.012	**.777**	.096	.006	.097
How likely be caught if made exaggerated or false insurance claim	.046	.009	.024	**.863**	.023
How likely to be caught if bought something that might be stolen	.028	-.037	.004	**.874**	.023
How likely to be caught if committed traffic offence	-.014	-.028	.047	**.788**	-.021
How often do police treat people in country with respect	.147	.070	.121	.012	**.815**
How often do police make fair, impartial decisions	.157	.107	.084	.009	**.820**
How often do the police explain their decisions and actions when asked	.100	.010	.009	.002	**.742**
Duty to: back decisions made by police, even if disagree	**.823**	.010	.027	.026	.129
Duty to: do what police say, even when don't understand or agree	**.915**	.061	.070	.022	.153
Duty to: do what police say even if treated badly	**.895**	.064	.067	.014	.148
How likely to call police if you see a man get his wallet stolen	.064	.013	**.747**	.088	.094
How willing to identify person who had done it	.053	.026	**.912**	.010	.057
How willing to give evidence in court against the accused	.032	.009	**.882**	-.025	.050
Cronbach alpha reliability score	**.874**	**.765**	**.830**	**.812**	**.731**

Extraction Method: Principal Component Analysis. Rotation Method: Varimax with Kaiser Normalization (Rotation converged in 5 iterations).

Inspection of Table A2 shows five factors were identified, representing 69.183% of the variance amongst the variables. In Table A3 the respective loadings are shown, showing the primary groupings of the items to the five factors. Also shown in Table A3 are the respective Cronbach alpha reliability scores, for the respective bold faced valued items for each factor. In each case, the Cronbach alpha values are above the acceptable 0.7 threshold value.

In this study, the actual factor scores were found using the regression approach, see Hair *et al.* (2010) and DiStefano *et al.* (2009), see Table A4, this multivariate procedure, which takes into account not only the correlation between the factors and between factors and observed variables (via item loadings), but also the correlation among observed variables, as well as the correlation among oblique factors. The factor scores are the dependent variables in the regression equation. Under this process, the computed factor scores are standardized to a mean of zero.

Table A4. Factor regression scores for the variables Compliant, Security, Cooperative, Effective and Fairness and separate outcome variable Trust, for the 20 considered countries

Case	Country	Compliant	Security	Cooperative	Effective	Fairness	Trust
1	Belgium	−0.078	−0.038	0.253	0.047	0.180	6.006
2	Bulgaria	−0.494	−0.441	−0.206	0.210	−0.371	3.779
3	Switzerland	0.256	0.146	0.370	0.158	0.237	7.032
4	Czech Republic	0.267	0.122	−0.508	0.029	0.200	4.882
5	Germany	0.175	0.038	0.545	0.066	0.222	6.756
6	Denmark	0.464	0.354	0.124	−0.104	0.374	7.676
7	Estonia	−0.245	−0.076	−0.204	0.208	0.083	6.173
8	Spain	−0.181	−0.175	0.055	0.093	0.475	6.228
9	Finland	0.410	0.479	0.056	0.025	0.379	8.032
10	France	−0.052	−0.211	0.310	0.128	−0.227	5.631
11	United Kingdom	−0.180	0.117	0.242	0.263	0.265	6.233
12	Hungary	0.189	−0.053	−0.221	0.181	−0.231	5.099
13	Israel	0.480	−0.701	−0.326	0.028	−0.545	4.718
14	Netherlands	0.095	0.063	0.082	−0.104	0.121	6.320
15	Norway	0.179	0.519	0.245	−0.098	0.247	7.206
16	Poland	0.135	0.448	−0.503	0.117	−0.367	5.379
17	Portugal	−0.030	−0.519	0.016	−0.786	−0.098	5.137
18	Russian Federation	−0.726	−0.001	−0.435	−0.356	−0.720	3.534
19	Sweden	0.323	0.357	0.068	−0.182	0.196	6.978
20	Slovenia	−0.806	0.234	−0.078	0.644	0.068	4.985

Also shown in Table A4 is the trust score, found by simply aggregating the trust value of the responses from each country.

Appendix B (Evaluation of 'Direct method' parameters)

This appendix briefly outlines the supporting evidence considered in identifying the three qualitative anchors of crossover, lower-threshold and upper-threshold, as defined in the direct method approach of Ragin (2007), employed for transforming an interval-scale variable to a membership-scale variable.

The crossover point is the value of the interval-scale variable where there is maximum ambiguity as to whether a case is more in or more out of the target set, hence is associated with a membership value of 0.5, here chosen to be the mid-point of the $pdf_i(x)$ in the considered interval. The lower-threshold and upper-threshold (x^T) values are those associated with membership values towards the limits of 0 and 1, as in Ragin (2007), here chosen here as 0.05 and 0.95. Using these three values, it is possible to calibrate the degree of membership in the target set, through the metric of log odds, utilizing the external criteria that have been operationalized in the three qualitative anchors. For variable values above the

crossover point, this translation can be accomplished by multiplying the relevant deviation scores by the ratio of the log odds associated with the verbal label for the threshold of full membership, 3.0 value here associated with the membership value of 0.95 (actually value nearer 0.953, see Ragin, 2007) to the deviation score designated as the threshold of full membership. For variable values below the crossover point, this translation can be accomplished by multiplying the relevant deviation scores by the ratio of the log odds associated with the verbal label for the threshold of full non-membership (−3.0 associated with membership value limit of 0.05 (actual value 0.047)) to the deviation score designated as the threshold of full non-membership. The log odds values (x_i^{LO}) can be found using the expression given below:

$$
x_i^{LO} = \begin{cases} (x^\times - x_i)\left(\dfrac{3}{x^{\mathrm{T}} - x^\times}\right) & x^\times - x_i \geq 0 \\[4mm] (x^\times - x_i)\left(\dfrac{-3}{x^{\perp} - x^\times}\right) & x^\times - x_i < 0 \end{cases}
$$

The identified value is the log odds metric, they not mere mechanistic re-scalings of the considered variable, for they reflect the imposition of external criteria via the three qualitative anchors. The use of such external criteria is the hallmark of measurement calibration. It is a small step from the log odds to the required degree of membership (μ_i) values that potentially range from 0.0 to 1.0, namely:

$$
\mu_i = \frac{e^{x_i^{LO}}}{1 + e^{x_i^{LO}}}.
$$

The supporting evidence for the calibration of the three qualitative anchors, lower-threshold, crossover and upper-threshold, is described in detail in Andrews *et al*. (2012), and is initially based on approximating the probability distribution of a variable (both for condition and outcome variables), in the form of a probability density function (*pdf*), for a variable (*pdf_i(x)*) (see Parzen, 1962; Silverman, 1900). For each constructed *pdf*, the associated 5th percentile (lower-threshold), 50th percentile (crossover) and 95th percentile (upper-threshold) were identified. Adhering to the philosophy of both quantitative and qualitative assessment of the selection of qualitative anchors (see Rihoux and De Meur, 2009), the surrounding pairs of cases (police forces through their variable values) around these identified qualitative anchor values were qualitatively assessed using the author's theoretical expertise (see also Greckhamer, 2011, for similar case based comparison

approach). It followed the 5th, 50th and 95th percentiles were consistently adopted for the three qualitative anchors.

References

Andrews, R., Beynon, M. J. and McDermott, A. (2012) Size, structure and organizational capability: A fuzzy-set Qualitative Comparative Analysis of government departments in the UK, *XVI Annual Conference of the International Research Society for Public Management (IRSPM)*, Rome.

Andrews, R., Beynon, M. J., and McDermott, A. M. (2015). Organizational Capability in the Public Sector: A Configurational Approach. *Journal of Public Administration Research and Theory*, forthcoming.

Barton, H and Beynon, M. (2012) "Policing for the people": A cluster based investigation of the relationship between police force operational performance and public opinion, *International Journal of Emergency Services*, 1(1), 29-38.

Beetham, D. (1991) *The legitimation of power*. London, Palgrave Macmillan.

Bradford, B., Jackson, J. and Stanko, E. (2009a) Contact and confidence: Revisiting the impact of public encounters with the police, *Policing and Society*, 19(1), 20-46.

Bradford, B., Jackson, J., Hough, M. and Farrall, S. (2009b) Trust and confidence in criminal justice system: A review of the British research literature, In A. Jokinen, E. Ruuskanen, M. Yordanova, D. Markov and M. Ilcheva (Eds.) JUSTIS project working papers review of need: Indicators of public confidence in criminal justice for policy assessment (pp. 141-173), Helsinki. Heuni.

Bradford, B., Stanko, E., and Jackson, J. (2009c) Using Research to Inform Policy: The Role of Public Attitude Surveys in Understanding Public Confidence and Police Contact, *Policing*, 3(2), 139-148.

Bradford, B. (2011) Convergence, not Divergence? Trends and Trajectories in Public Contact and Confidence in the Police, *British Journal of Criminology*, 51(1), 179-200.

Cavadino, M and Dignan, J (2008) Penal Systems: A comparative approach, London.

Cavadino, M. and Dignan, J. (2013) Political Economy and Penal Systems. In European Handbook of Criminology, edited by Body-Gendot, S., Hough, M., Levy, R., Kerezsi, K. and Snacken, S., London. Routledge.

Clark, J. and Wildavsky, A.B. (1990) *The moral collapse of communism: Poland as a cautionary tale*. San Fransisco: Institute for Contemporary Studies Press.

Coicaud, J-M. (2002) *Legitimacy and politics: A contribution to the study of political right and political responsibility*, Cambridge: Cambridge University Press.

Cocking, C. (2013) The role of "zero-responders" during 7/7: implications for the emergency services, *International Journal of Emergency Services*, 2(2), 79-93.

Cruddas, S. (2013) An introduction to structural equation modelling for emergency services and disaster research. *International Journal of Emergency Services"*, 2(2), 131-14.

DiStefano, C., Zhu, M. and Mîndrilă, D. (2009) Understanding and Using Factor Scores: Considerations for the Applied Researcher, *Practical Assessment, Research & Evaluation*, 14(20), 1-10.

Favarel-Garrigues, G. and Le Huérou, A. (2004). State and the multilateralization of policing in post-Soviet Russia. *Policing and Society, 14*(1), 13-30.

Fiss, P. C. (2011) Building Better Causal Theories A Fuzzy Set Approach to Typologies in Organisation Research, *Academy of Management Journal*, 54(2), 393-420.

Fitgerald, R. (2012) *Forward*, Policing by Consent: Topline Results (UK) from Round 5 of the European Social Survey, Report, 1-13.

Greckhamer, T. (2011) Cross-cultural Differences in Compensation Level and Inequality across Occupations: A Set-theoretic Analysis, *Organization Studies*, 32(1), 85-115.

Hair, J. F., Black, B. C., Babin, B. J. and Anderson, R. E. (2010) Multivariate Data Analysis (7th Edition), Prentice Hall, NJ, US.

Hawdon, J. (2008) Legitimacy, Trust, Social Capital, and Policing Styles: A Theoretical Statement, *Police Quarterly*, 11(2), 182-201.

Hofstede, G. (1980), *Culture's Consequences: International differences in work-related values,* London, Sage Publications.

Hofstede, G. (2001), *Culture's Consequences*, 2nd Edition, London, Thousand Acres.

Hohl, K., Bradford, B. and Stanko, E. A. (2010) Influencing Trust and Confidence in the London Metropolitan Police, *British Journal of Criminology*, 50(3), 491-513.

Hough, M., Jackson, J., Bradford, B., Myhill, A., and Quinton, P. (2010) Procedural Justice, Trust and Institutional Legitimacy. *Policing: A Journal of Policy and Practice,* 4/3: 203-210.

Hough, M., Jackson, J. and Bradford, B.(2013)Trust in Justice and the Legitimacy of Legal Authorities: Topline Findings from a European Comparative Study. In European Handbook of Criminology, edited by Body-Gendot, S.,Hough,M., Levy,R., Kerezsi, K. and Snacken,S., London. Routledge.

Hough, M. and Maffei, S. (2013) Trust in Justice- Thinking about Legitimacy. In European Handbook of Criminology, edited by Body-Gendot, S., Hough, M., Levy, R., Kerezsi, K. and Snacken, S., London. Routledge.

Hough, M. and Sato, M. (2011) *Trust in justice: why it is important for criminal policy, and how it can be measured*. Final report of the Euro-Justis project.

Jackson, J. and Sunshine, J. (2007) Public Confidence in Policing a Neo-Durkheimian Perspective, *British Journal of Criminology*, 47(2), 214-233.

Jackson, J. and Bradford, B. (2008) Crime, policing and social order: on the expressive nature of public confidence in policing. *British Journal of Sociology*, 60(3), 493-521

Jackson, J., Bradford, B., Hohl, K. and Farrall, S. (2009) Does the fear of crime erode confidence in policing. *Policing* 3(1), 100-111

Jackson, J., Bradford, B., Hough, M., Kuha, J., Stares, S., Widdop, S., Fitzgerald, R., Yordanova, M. and Galev, T. (2011) Developing European indicators of trust in justice, *European Journal of Criminology*, 8(4), 267-285

Jackson, L. (2012) Public Confidence in Policing in the 21st Century, *International Journal of Emergency Services*, 1(1), 135-138.

Kääriäinen, J. and Sirén, R. (2011) Trust in the police, generalized trust and reporting crime, *European Journal of Criminology*, 8(1), 65-81.

Kittler, M., Rygl, D. and Mackinnon, A. (2011) Beyond culture or beyond control? Reviewing the use of Hall's high-/low-context concept, *International Journal of Cross-Cultural Management*, 11 (1), 63-82.

Larsen, J. E. and Blair, J. P. (2009) The Importance of Police Performance as a Determinant of Satisfaction with Police, *American Journal of Economics and Business Administration*, 1(1), 1-10.

Laurent, A. (1983) The cultural diversity of Western conceptions of management, *International Studies of Management and Organization*, 13 (1,2), 75-96.

Laurent, A. (1986) The cross-cultural puzzle of international human resource management, Human Resource Management, 25(1), 91-102.

Markov, D. (2009). Review of the importance of public confidence as a tool for policy assessment. In A. Jokinen, E. Ruuskanen, M. Yordanova, D. Markov, & M. Ilcheba (Eds.), Review of need: Indicators of public confidence in criminal justice for policy assessment. Helsinki: HEUNI.

Moore, M. H. (1995) *Creating public value: Strategic management in government*, Cambridge, Harvard University Press.

Parzen, E. (1962) On Estimation of a Probability Density Function and Mode, Ann. Math. Statist. 33(3), 1065-1076.

Ragin, C. C. (1987) *The comparative method: Moving beyond qualitative and quantitative strategies.* Berkeley: University of California Press.

Ragin, C. C. (2000) *Fuzzy set social science.* Chicago: University of Chicago Press.

Ragin, C. C. (2005) From fuzzy sets to crisp truth tables. Compass Working Paper, WP 2004-28

Ragin, C. C. (2006) Set relations in social research: Evaluating their consistency and coverage. *Political Analysis*, 14, 291-310.

Ragin, C. (2007) Calibration versus measurement, In *Methodology*: *Oxford Handbooks of Political Science*. D. Collier, H. Brady, and J. Box-Steffensmeier (eds.). Oxford: Oxford University Press.

Ragin, C. C. (2008) Redesigning social inquire: fuzzy sets and beyond. Chicago: The University of Chicago Press.

Ragin, C. and Davey, S. (2014) *fs/QCA [Computer Programme]*, Version 2.5. Irvine, CA: University of California.

Ragin, C. C. and Fiss, P. C. (2008) Net effects analysis versus configurational analysis: An empirical demonstration. In C. C. Ragin (Ed.), Redesigning social inquiry: Fuzzy sets and beyond: 190-212. Chicago: University of Chicago Press.

Raine, G. and Keasey, P. (2012) "From Police Authorities to Police and Crime Commissioners" Might policing become more accountable? *International Journal of Emergency Services*, 1(1), 122-134.

Ragin, C. C. and Sonnett, J. (2004) Between complexity and parsimony: Limited diversity, counterfactual cases, and comparative analysis. Working paper posted at http://www.compasss.org/WP.htm. in S. Kropp and M. Minkenberg (eds.), Vergleichen in der politikwissenschaft. Wiesbaden: VS Verlag für Sozialwissenschaften.

Ragin, C. C., Strand, S.I. and Rubinson, C. (2008) User's guide to Fuzzy-Set/Qualitative Comparative Analysis.

Rihoux, B. and De Meur, G. (2009) Crisp-Set Qualitative Comparative Analysis (csQCA), 33-68. In Benoit Rihoux and Charles C. Ragin (eds) *Configurational comparative methods*. California: Sage.

Schaap, D. (2012) Citizen's trust in the police: Assessing the impact of procedural justice, the instrumental approach, and proximity policing in an international comparative perspective. Masters' Thesis. Radboud University Nijmegen.

Schulhofer, S. J., Tyler, T. R. and Huq, A. Z. (2011) American Policing at a Crossroads: Unsustainable policies and the procedural justice alternative, *Journal of Criminal Law and Criminology*, 101(2), 335-375.

Shlapentokh, V. (2006). Trust in public institutions in Russia: The lowest in the world. *Communist and Post-Communist Studies,* 39(2), 153-174.

Silverman, B. W. (1990) *Density Estimation for Statistics and Data Analysis*, Chapman and Hall.

Skidmore, P. (2006) *Public value and policing*, The Work Foundation, London.

Stoutland, S. E. (2001). 'The multiple dimensions of trust in resident-police relations in Boston. *Journal of Research in Crime and Delinquency*, 38, 226-256

Sunshine, J. and Tyler, T. (2003) The role of procedural justice in legitimacy in shaping public support for policing. *Law and Society Review*, 37(3), 513-48.

Tyler, T. R. (2001) Public trust and confidence in legal authorities. What do majority and minority group members want from the law and legal institutions? *Behavioural Sciences and the Law*, 19(2), 215-235.

Tyler, T. and Huo, Y. (2002) Trust in the law: Encouraging public cooperation with the police and the courts, *New York: Russell Sage Foundation.*

Tyler, T. R. (2006) Psychology and Institutional Design. *Annual Review of Psychology*, 57, 375-400.

Tyler, T. R. (2011) Trust and legitimacy: policing in the US and Europe. *European Journal of Criminology*. Vol. 8 No.4: 254-266.

Tyler, T. R. and Boeckmann, R.J. (1997) Three Strikes and You Are out, but Why? The Psychology of Public Support for Punishing Rule Breakers, *The Law & Society Review*, 31(2), 237-266.

Vis, B. (2009) Governments and unpopular social policy reform: Biting the bullet or steering clear?, *European Journal of Political Research*, 48, 31-57.

Wagemann, C. and Schneider, C. Q. (2010) Standards of Good Practice in Qualitative Comparative Analysis (QCA) and Fuzzy-Sets, *Comparative Sociology*, 9(3), 397-418.

Whiteley, P. (2000) Economic growth and social capital. *Political Studies.* 48: 443-466.

Wu, Y. and Sun, I. Y. (2009) Citizen Trust in Police: The Case of China, *Police Quarterly*, 12(2), 170-191.

ⁱ The H-Trust expression is now associated with the μ_{Trust} as given in Figure 1f. The consideration of L-Trust can be undertaken by considering the compliment of the membership values of H-Trust (referring to Appendix B, consider 1 - μ_{Trust}).

ⁱⁱ Strong membership refers to the procedure of assigning 1 to degrees of membership values > 0.5, and 0 to those < 0.5, hence each welsh local authority will be associated with one configuration of characteristics (Ragin *et al.*, 2008; Greckhamer, 2011).

ⁱⁱⁱ This consistency threshold level, of 0.94 here, was found through the consideration of a number of trials, and consideration of those configurations either side of the considered threshold level employed. The value was also found with the criteria not to have the same configurations assigned 1 in both analyses of the H-Trust and L-Trust outcomes (while not a strict necessity it was felt pertinent in this exploratory analysis to have clear distance between the configurations to be considered associated with H-Trust and L-Trust outcomes).

^{iv} Between the complex and parsimonious solutions, there is the possibility to consider an intermediate solution which utilises counterfactual cases, from amongst the remainders, identified by the research. This may be pertinent in the future.

^v Unique consistency measures the degree to which cases sharing a given condition agree in displaying the relative outcome. Raw coverage measures the overall coverage of a combination that may overlap with other combinations. Unique coverage refers to coverage uniquely due to a combination.