Beyond police culture

A quantitative study of the organisational culture in 64 local police forces in Belgium

Heidi Paesen and Jeroen Maesschalck
Leuven Institute of Criminology, University of Leuven, Leuven, Belgium, and
Kim Loyens
*Utrecht University School of Governance,
Utrecht University, Utrecht, The Netherlands*

Abstract

Purpose – Combining insights from the traditional literature on police culture with insights from the broader literature on organisational culture and on grid-group cultural theory (Douglas, 1970), the purpose of this paper is to introduce a new 15-dimensional framework of "organisational culture in the police" and test this framework via a survey instrument. This new conceptualisation is broader than the traditional police culture concept and allows for comparisons of the police with other organisations.

Design/methodology/approach – A newly developed instrument to measure the 15-dimensional framework, called the "Leuven Organisational Culture Questionnaire (LOCQ)", was tested in 64 local police forces in Belgium ($n = 3,847$).

Findings – The hypothesised 15-dimensional model is largely confirmed by confirmatory factor analysis. Assessments of between-unit variation show that the LOCQ is sufficiently sensitive to identify differences between work units in police organisations. The authors also find that traditional police culture characteristics tend to vary slightly less between units than the other characteristics. Also, there is less variation for characteristics related to police work (e.g. law enforcement orientation and citizen orientation) than for characteristics associated with the unit level (e.g. weak supervisory support and internal solidarity) or the organisational level (e.g. rule orientation and results orientation).

Originality/value – This paper expands the traditional "police culture" concept to a more generic and theory-driven conceptualisation of "organisational culture in the police". The survey instrument offers a standardised way to map and compare culture within police organisations, and to compare it with the culture of other organisations both within and outside law enforcement.

Keywords Organizational culture, Police culture, Officer surveys

Paper type Research paper

1. Introduction

Since the seminal work of William Westley in the local police of Gary (Indiana) in the late 1940s (but only published in 1970), police culture has been studied extensively, initially in qualitative, often ethnographic, research (e.g. Banton, 1964; Cain, 1973; Holdaway, 1983; Rubinstein, 1973) and later also in quantitative research (e.g. Cochran and Bromley, 2003; Ingram *et al.*, 2013, 2018; Nickels and Verma, 2008; Paoline *et al.*, 2000; Terpstra and Schaap, 2013). Police work is said to have a number of characteristics including the constant pressure to get results, large *de facto* discretion, danger combined with boredom, status frustration and working with the dark side of society. Those characteristics, in turn, are said to generate cultural characteristics: deep-rooted solidarity and loyalty, social isolation and an "us-versus-them" attitude, a powerful sense of mission to fight crime, moral cynicism, machismo, authoritarian conservatism and racial prejudice (Cockcroft, 2012; Crank, 2004; Loftus, 2010; Paoline, 2003; Reiner, 2010, 2017).

Although "police culture" is still one of the most commonly used concepts in the field of police studies (Brough *et al.*, 2016; Cordner, 2017), it is at the same time also one of the most contested and criticised concepts. First, the original hypothesis that culture in police organisations is homogeneous and stable is challenged by more recent research that found

significant variation within and between police departments and work units (e.g. Cochran and Bromley, 2003; Cordner, 2017; Ingram *et al.*, 2013, 2018; Paoline, 2004; Terpstra and Schaap, 2013). Interestingly, that research still focuses on the traditional characteristics of police culture. As Campeau (2015, p. 681) argues, this is problematic because, "if scholars continue to approach the study of police culture with an eye for the 'core characteristics', the answer to whether these persist is likely to remain affirmative: we can confirm the ideal-type every time". If real-life police culture would be broader and more complex than we hypothesise, we would not observe it using existing measurement instruments. Moreover, this idiosyncratic focus on what are thought to be core police culture characteristics makes it difficult to compare the culture of police organisations with that of other organisations. Second, police culture's focus on cultural characteristics with an often negative connotation deserves critique (Brough *et al.*, 2016; Paoline, 2003; Terpstra and Schaap, 2013). This one-sided view overlooks desirable characteristics that can also be found in real-life policing such as service orientation and rule orientation. Third, the way in which police culture has been measured in quantitative research can be criticised. While it was initially developed and researched in qualitative, ethnographic research, a number of researchers indeed aimed to measure it in quantitative survey research (e.g. Cochran and Bromley, 2003; Nickels and Verma, 2008; Paoline *et al.*, 2000). In practice, however, most of these instruments measure work-related attitudes of individual officers, rather than a collective, shared culture at supra-individual (e.g. unit or organisational) level (Ingram *et al.*, 2013, 2018). Finally, the fourth critique concerns the weak theorisation of the police culture concept (Paoline, 2003; Ingram *et al.*, 2018). It consists of a relatively loose list of characteristics of very diverse nature. This lack of overall framework or classification logic makes it difficult to develop theoretically sound and falsifiable explanations of police culture or to use police culture to explain police officer behaviour.

Some authors (e.g. Terpstra and Schaap, 2013) have attempted to address these critiques by expanding and nuancing the concept, while maintaining the core conceptualisation of police culture as a set of characteristics with a largely negative connotation. Other researchers decided to do away with the concept altogether. They use other terms such as "professional norms and values in policing" (Wasserman and Moore, 1998) or "institutional logics in policing" (Rautiainen *et al.*, 2017) that relate to (aspects of) police culture but without building on the insights from earlier police culture research. A third group of researchers (e.g. Campeau, 2019; Cockcroft, 2012; Whelan, 2016) embed the police culture concept in the broader organisational culture literature. This leads to interesting insights on the role of "old" and "new" cultural scripts in maintaining cultural inertia (Campeau, 2019), on the impact of networks on cultural change (Whelan, 2016), and on the distinction between occupational and organisational culture (Cockcroft, 2012). We intend to contribute to this latter strand of literature by proposing a new framework of organisational culture that combines dimensions that refer to traditional police culture characteristics with dimensions that refer to other organisational culture characteristics.

This paper will first introduce the new 15-dimensional framework and then present a survey instrument to test the framework. This instrument was applied in a sample of 64 local police forces in Belgium ($n = 3,847$). Confirmatory factor analysis (CFA) will test whether the preconceived factor structure (i.e. the 15-dimensional model) is actually present in the data. An analysis of the agreement within work units and of variation between work units will test whether our instrument is sensitive enough to differentiate between work units. It will also indicate which culture characteristics are more prone to variation and which are less so.

2. Towards a new organisational culture framework
"Organisational culture" is defined here as "[a] set of core values, behavioral norms, artifacts and behavioral patterns which govern the way people in an organization interact with each

other and invest energy in their jobs and in the organization at large" (van Muijen *et al.*, 1999, p. 555). For the operationalisation of the concept, we decided to move away from the idea that there would be one "ideal type" of police culture (Reiner, 2010) that is defined by a number of characteristics. Rather than expecting to find one type of police culture, we hypothesised that police organisations would vary in values, norms and behaviour and that this variation can be captured along a number of dimensions. Each individual police organisation or unit within an organisation would then have its own "profile" defined by the combined scores on those dimensions (Ostroff and Schulte, 2014). To identify those dimensions, we started from a generic framework that we took from "grid-group cultural theory". While this framework has some important similarities with well-known frameworks in the organisational culture literature such as Quinn and Rohrbaugh's (1981) competing values framework, it has two particular advantages over them. First, it adds a dimension (fatalism, see below) that is often found empirically but overlooked in most conceptualisations of organisational culture. Second, it has a broader theoretical base far beyond organisational studies, going back to the seminal work of the anthropologist Mary Douglas (1970), with latter applications in criminology (Mars, 2006; Vaughan, 2002), public administration (Hood, 1998), police studies (Hendriks and Van Hulst, 2016; Loyens, 2013b) and many other fields. This broader theoretical base is very useful to generate hypotheses about the antecedents and the effects of organisational culture (see below).

Central in grid-group cultural theory is a framework that is based on two axes ("grid" and "group") that together form the basis for four cultural dimensions[1]. The "grid" axis refers to "the degree to which an individual's life is circumscribed by externally imposed prescriptions" (Thompson *et al.*, 1990, p. 5). The "group" axis is generally understood as "the extent to which an individual is incorporated into bounded units" (Thompson *et al.*, 1990, p. 5). Combined, these two axes form a two-by-two matrix with four cultural dimensions: hierarchy (high grid, high group), egalitarianism (low grid, high group), individualism (low grid, low group) and fatalism (high grid, low group). Table I provides a brief conceptualisation of each of the dimensions, representing them as cells in a two-by-two matrix.

Although this fourfold framework looks promising, earlier research (Wouters, 2016) showed that the four dimensions were not enough to really capture useful variation between organisations and to explain behavioural outcomes. We decided to further specify the framework as depicted in Figure 1. Instead of four cells in a matrix, the framework is now presented as eight positions in a space defined by two axes with three points on them (respectively low, middle and high). For example, the top right position on Figure 1 is defined by high group and high grid, while the position immediately below is defined by high group and medium grid. However, even those eight positions were not specific enough

	Low group	High group
High grid	**Fatalism** Employees feel strongly bound by rules and prescriptions, without feeling incorporated in a group. They attempt to survive in an unpredictable environment in which they believe nobody can be trusted	**Hierarchy** Employees are bound by roles, rules and procedures within a well-defined group. They feel responsible to behave according to their position in the organisation
Low grid	**Individualism** Employees are like entrepreneurs: pursuing their own interest m a competitive environment with few formal constraints	**Egalitarianism** Employees are equal and should cooperate for the welfare of the group. The emphasis is on consensus-building through deliberation, not on rules and procedures

Table I.
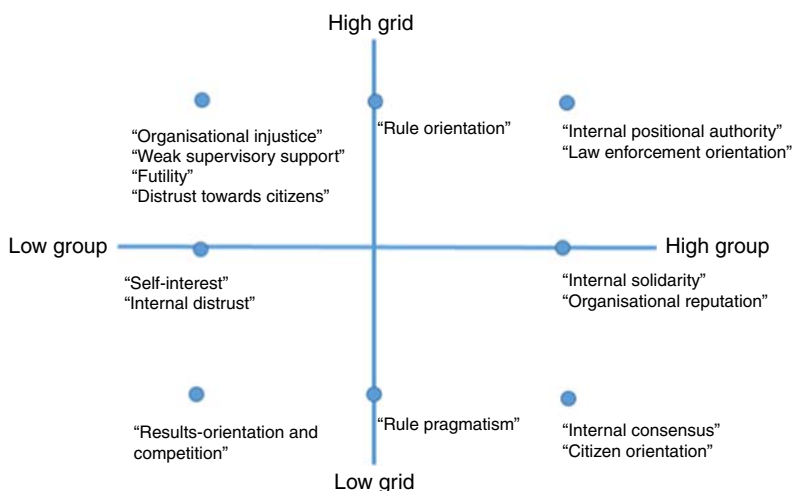The grid-group framework of cultural dimensions

for our purposes. They had to be further specified with dimensions that are really meaningful in the context of organisations and that have shown to have explanatory value. This specification of the eight positions in more meaningful dimensions was done on the basis of an extensive review of existing frameworks of organisational culture and climate (including police culture) as well as empirical tests of earlier versions of the framework[2]. As Figure 1 shows, the specification was not driven by a logic shared across all eight positions (e.g. by adding a third axis). Instead, the result is an *ad hoc* specification varying from just one dimension (on the low-grid medium-group position) to four dimensions (on the high-grid low-group position). This illustrates that the aim was rather to generate dimensions that are empirically meaningful than to achieve theoretical elegance. The result of all this is the identification of 15 dimensions allocated to eight points in a space defined by two axes. While 15 is a lot, we do claim that this is still a parsimonious framework, because we argue that all 15 are necessary to really capture the specific culture of a (police) organisation. In fact, a glance at organisational culture research shows that it features many more dimensions that we did not include. Some of those were not included because we do not consider them as dimensions of organisational culture. For example, we see "autonomy" more as a job characteristic than as a dimension of culture. Other dimensions were not included because they were already incorporated in our 15 dimensions. For example, Denison and Mishra's (1995) "team orientation", "agreement" and "customer focus" match, respectively, with our dimensions "internal solidarity", "internal consensus" and "citizen orientation". We now discuss each of the 15 dimensions depicted in Figure 1, starting with the four positions on the axes and then moving on to the four positions in the quadrants. While we claim that these dimensions capture the culture of a broad range of organisations, the discussion below will focus on the meaning of each of the dimensions in the context of police organisations.

We first look at the two positions on the vertical axis "grid". In an organisational context, the high-grid medium-group position refers to the cultural dimension "rule orientation". Our operationalisation of this is inspired by Victor and Cullen's (1987) operationalisation of rule climate. While this dimension is usually not central to the traditional police culture concept as explained above, it certainly is a very important characteristic of the actual culture in police organisations (Chan, 1997; Willis and Mastrofski, 2016). For Herbert (1998), rules and laws constitute one of the six normative orders that shape the social world of the police.

The low-grid medium-group position is here described as "rule pragmatism": the idea that work should be guided more by what happens in practice than by rules and procedures. Given the large *de facto* discretion of police officers, they often have the opportunity to ignore, disregard, stretch or only provisionally apply rules, procedures and laws. A large body of research shows that they indeed use this opportunity (e.g. Brogden and Shearing, 1993).

The two positions on the group axis are each specified in two dimensions. The first dimension of the high-group medium-grid position is "internal solidarity". This strongly resembles the group loyalty characteristic of the traditional police culture concept and there is indeed much research that shows deep-rooted solidarity among police officers (Crank, 2004; Prenzler, 1997; Skolnick, 2005). The second dimension of the high-group medium-grid position, "organisational reputation", refers to the importance employees attach to the image and the reputation of their organisation. Several studies find that police officers do focus on promoting a positive image of the organisation and its members (Brough *et al.*, 2016; Prenzler, 1997). Indeed, a positive image is essential for the police organisation's legitimacy and the effectiveness of police work, which largely relies on cooperation by citizens (Greene, 2007). The low-group medium-grid position on the left-hand side of the axis in Figure 1, is also captured by two cultural dimensions. First, "self-interest" refers to a culture where employees are mainly interested in furthering their own interests. It was inspired by Victor and Cullen's (1988) operationalisation of self-interest. Cockcroft (2012), for example, observes much self-interest in police organisations. Self-interest sometimes overrides the blue code of silence. Both Punch (1985) and Loyens (2013b) found that some police officers were willing to break the code of silence out of self-interest (e.g. career planning or self-protection). Charman (2017, p. 274) even concludes that the benefits of the "blue code of self-protection" now outweigh the "blue code of silence". Second, "internal distrust" refers to a culture where employees do not trust each other, nor their supervisors. Traditionally, research on distrust within the police primarily focuses on distrust between street cops and management cops (Campeau, 2015; Paoline, 2003), which has been ascribed to factors like management cops' unpredictable and punitive oversight (Paoline *et al.*, 2000). In such a context, street cops would recommend each other to stay as much as possible out of management's sight by "laying low" or "flying under the radar" (Paoline, 2003, p. 202; Paoline *et al.*, 2000, p. 578). Yet, there are also quite some reports of distrust among police officers that are not along the lines of the street-cop/management-cop distinction. Faull (2018), for example, found in his ethnographic study in South-Africa that some detectives almost never left their offices unlocked out of fear of being robbed by colleagues. Charman (2017) described issues of trust between traffic officers and firearms officers. All this shows that the assumption of strong internal solidarity within the police at least needs nuancing. A type of distrust that better fits the traditional view on police culture concept is the suspicion with which new colleagues are often treated (Brough *et al.*, 2016; Paoline, 2003), as illustrated by Reuss-Ianni's(1983) line "Don't trust a new guy until you have checked him out".

The high-grid high-group position (hierarchy) can be captured in the context of organisations by an internal and an external dimension. The internal dimension, "internal positional authority", refers to employees' perceptions of stratified role differentiation (Gross and Rayner, 1985) that also implies a formal power difference. Each employee thus has his or her formal position and role within the organisation with its accompanying responsibilities (Loyens, 2013a). Authority is important in this environment, but only if it is legitimate (White, 1999). It is linked to a position, rather than to a person, and it is constrained by rules. Police organisations are often described as having a formal bureaucratic structure with clear lines of authority and decision making (Herbert, 1998). The external dimension "law enforcement orientation" is inspired by Cochran and Bromley's (2003) measure of crime control orientation. It refers to employees' perceptions that citizens should first and foremost be pressed to comply with the law (Loyens, 2012).

This orientation is often contrasted with a service orientation (Myhill and Bradford, 2013) and fits in the traditional police culture notion that police officers have a powerful sense of mission to fight crime.

The low-grid high-group position (egalitarianism) can also be captured by an internal and an external dimension. "Internal consensus" refers to a highly participatory culture where decisions are only final when everybody agrees. While this notion is certainly absent in the traditional police culture concept, some argue that this kind of participatory decision making is on the rise in policing as it is in many other organisations (Vadackumchery, 1999). The external dimension is labelled as "citizen orientation". It was inspired by Cochran and Bromley's (2003) measure of "work orientation toward service-related activities". It describes a culture where police officers are genuinely concerned about the welfare of citizens and invest in informal contacts with them. While this dimension is virtually absent in the traditional police culture literature, there are reasons to believe the importance of this dimension has increased, for example following the many efforts to strengthen community-oriented policing (Brough *et al.*, 2016; Paoline *et al.*, 2000).

The low-grid low-group position (individualism) here takes the form of "results-orientation and competition". The traditional police culture literature describes how police officers experience a constant pressure to get results in terms of crime reduction and order maintenance (Myhill and Bradford, 2013; Skolnick, 2005). This pressure further increased with more recent pressures on police organisations to become more managerial, both in their mission and in their practices (Sklansky, 2007; Willis and Mastrofski, 2016). These pressures to perform might in turn increase competition within the police organisation (Loftus, 2009, 2010).

The high-grid low-group position (fatalism) is the most original part of the grid-group framework and covers four dimensions that are important in many organisations including the police. These are two internal dimensions ("organisational injustice" and "weak supervisory support"), one external dimension (distrust towards citizens) and one dimension that can be both internal and external (futility). First, "organisational injustice" refers to a culture where employees feel that they are treated unfairly by the organisation. This dimension is not addressed explicitly in the traditional police culture literature, but it does refer to a reality in at least some police organisations. Workman-Stark (2017), for example, found that police officers expressed frustration with perceived injustices within the organisation and Reynolds *et al.* (2018) found, in their interviews with 24 police officers, that most of them reported being personally impacted by perceived injustice. Second, "weak supervisory support" refers to employees' feeling that they are not, or not enough, supported by their managers when they need them. Again, this reflects a reality in police organisations. In a study in a Dutch regional police force, Terpstra and Schaap (2013) found that the majority of the police officers had a negative perception of supervisory support. Chan (2007) observed that the lack of personal support from management was an important source of frustration for many police officers. Likewise, Charman (2017) found that police officers often did not feel sufficiently supported by senior management in times of difficulties. Third, the dimension "distrust towards citizens" refers to police officers' distrust of citizens as well as to indifference to their problems. It was inspired by Cochran and Bromley's (2003) and Regoli *et al.*'s (1991) operationalisation of cynicism, a core characteristic of police culture. In this perspective, police officers see citizens as trouble rather than as partners in crime control, believing that citizens are more apt to obstruct police work than to assist in performing their duties (Myhill and Bradford, 2013; Regoli *et al.*, 1991). Fourth, the dimension "futility" refers to a culture where employees feel they do not really make a difference with their work. It resembles the meaninglessness dimension of "policy alienation" (Tummers *et al.*, 2009), a concept used in research on policy implementation. While it may not be explicitly listed as a characteristic of traditional police culture, many studies do describe this phenomenon in the police context. Police officers are

often described as having the feeling that "criminals" get away because of weak laws and lenient magistrates (Chan, 2007; Loftus, 2009). Loyens (2016), for example, found that police detectives had the perception that the investigative steps they took only had little impact (i.e. offenders not being stopped and victims not being saved). Likewise, Charman (2017) found, in her study of the socialisation of police recruits, that as time progresses, recruits increasingly felt that they were not able to have an impact on the community they serve.

3. Methods
The data used in this paper were collected via an online survey in March–June 2017[3]. For this survey, 85 local police forces in four provinces in Flanders (Belgium) were invited to participate. In total, 64 police forces – varying in size from about 50 to 450 employees – accepted to do so. Within the 64 police forces, no sample was drawn. All 8,003 employees (both sworn officers and civilian employees) first received a pre-notice mail by the top management of each organisation informing them about the research and about the opportunity to opt out of the study. In total, 49 employees have used this option. The remaining 7,954 employees received an e-mail request to fill out the survey containing a personalised URL link. Later, two or three (depending on the police force) reminders were sent via e-mail. Of the 8,003 potential respondents, 3,847 respondents (48.1 per cent) answered at least one question and 3,363 respondents (42.0 per cent) reached the end of the survey. The latter means that 13 per cent of those who had started filling out the survey stopped before it was completed. This drop-out might have had to do with the total length of the survey (227 questions in total).

For the operationalisation of the 15 dimensions of organisational culture into specific survey items, we developed a new measurement instrument, the "Leuven Organisational Culture Questionnaire (LOCQ)". The 50 items of this instrument[4] are not police specific because the aim is to use the survey across various organisational contexts. Nevertheless, police practice was certainly taken into consideration during the design of the instrument. A number of items were almost directly taken from existing measurement instruments (see Table II). The other items were either drastically reformulated or developed for the first time. The respondents had to evaluate the items on a seven-point Likert-scale with each of the seven points labelled, ranging from "strongly disagree" (1) to "strongly agree" (7).

While the data are collected at individual level, they do intend to measure shared values, norms and behaviour. Hence, respondents are asked to shift their reference from themselves to the collective. This "reference-shift" (Chan, 1998) can be seen from the use of "in my unit" in the survey items. The choice to focus on the level of the work unit rather than on the level of the organisation (i.e. police force) is in line with recent research, including police research (e.g. Ingram *et al.*, 2013, 2018), that identified the work unit as a viable context for measuring culture in police organisations. Moreover, for most employees the organisational level is too abstract and too distant from their day-to-day reality (van den Berg and Wilderom, 2004). Based on the conceptualisation of Kozlowski and Bell (2003, p. 334) and Ingram *et al.* (2013, p. 371), "work unit" here refers to a group of colleagues, typically consisting of 2 to about 40 employees, who are (semi-)permanently assigned to the same organisational entity[5]. The individuals within the work unit have a shared goal or mission, they regularly interact with each other during their work, and they depend on each other to perform their tasks.

4. Results
In order to test the 15-dimensional organisational culture model, we performed a CFA with Mplus 7.4. First, a 15-dimensional model with 50 items was estimated in Mplus. The full model, estimated with maximum likelihood estimation[6], had an acceptable fit (RMSEA = 0.046; CFI = 0.938; TLI = 0.929)[7]. However, further inspection of the factor loadings showed that the item LAW_3 (In my unit, citizens are considered subordinates

Item	Code	Standardized factor loadings	Residual variances
Internal solidarity (α = 0.949; C = 0.950)			
In my unit, we are a tightly-knit group	SOL_1	0.932	0.131
In my unit, we are willing to do anything for each other	SOL_2	0.911	0.169
In my unit, there is much solidarity between colleagues	SOL_3	0.919	0.155
In my unit, team spirit is considered very important[b]	SOL_4	0.869	0.244
Organisational reputation (α = 0.887; C = 0.892)			
In my unit, we are concerned about the image of the organisation[c]	ORG_1	0.913	0.166
In my unit, we consider the reputation of the organisation very important	ORG_2	0.910	0.172
In my unit, we are expected to do everything we can to enhance the organisation's image	ORG_3	0.737	0.457
Internal consensus (α = 0.880; C = 0.882)			
In my unit, decisions are taken by consensus[d]	CON_1	0.897	0.196
In my unit, we only make a decision when everyone is actually in agreement	CON_2	0.808	0.347
Meetings with colleagues are focussed on reaching consensus[e]	CON_3	0.828	0.315
Citizen orientation (α = 0.802; C = 0.827)			
In my unit, we consider it very important to be sensitive to the needs of the citizen	CIT_1	0.865	0.252
In my unit, establishing informal contact with citizens is considered important	CIT_2	0.589	0.654
In my unit, we are genuinely concerned about the welfare of the citizens with whom we directly interact[f]	CIT_3	0.876	0.232
Rule pragmatism (α = 0.753; C = 0.765)			
In my unit, employees are not unnecessarily weighed down by rules and procedures while performing their work	PRAG_1	0.523	0.727
In my unit, reality, rather than what is written on paper is what counts the most	PRAG_2	0.747	0.442
In my unit, informal agreements are often considered as more important than formal rules	PRAG_3	0.675	0.544
In my unit, the spirit of the law is considered more important than the letter of the law	PRAG_4	0.725	0.475
Results orientation and competition (α = 0.795; C = 0.822)			
In my unit, there is competition between employees[g]	RES_1	0.940	0.117
In my unit, there is a lot of competition between employees to achieve the best results[h]	RES_2	0.876	0.232
In my unit, the pressure to achieve results is huge	RES_3	0.472	0.778
Self-interest (α = 0.936; C = 0.936)			
In my unit, employees mainly care about themselves[i]	SELF_1	0.926	0.143
In my unit, employees protect their own interests above all other considerations[j]	SELF_2	0.898	0.194
In my unit, personal interests outweigh the collective interest	SELF_3	0.908	0.176
Internal distrust (α = 0.906; C = 0.908)			
In my unit, employees do not trust each other	INTDIS_1	0.899	0.193
In my unit, employees don't make much effort for each other – after all, it will only lead to criticism	INTDIS_2	0.898	0.194
In my unit, there is much distrust between employees and the immediate supervisor	INTDIS_3	0.701	0.509
In my unit, anything employees say or do can be used against them later	INTDIS_4	0.740	0.453
In my unit, the atmosphere can change at any time	INTDIS_5	0.820	0.327

(continued)

Table II.
Results of the CFA on
the 15-dimensional
model of
organisational culture[a]

Item	Code	Standardized factor loadings	Residual variances
Organisational injustice (α = 0.887; C = 0.895)			
In my unit, employees are generally treated unfairly[k]	INJUST_1	0.884	0.218
In my unit, employees are treated unfairly[l]	INJUST_2	0.890	0.208
In my unit, decisions made about employees are not made objectively[m]	INJUST_3	0.805	0.353
Weak supervisory support (α = 0.884; C = 0.888)			
In my unit, employees are not supported by the supervisor(s) when it really matters	WEAK_1	0.899	0.191
In my unit, employees are occasionally abandoned by the supervisor(s)	WEAK_2	0.906	0.179
My immediate supervisor does not help employees when they need it[n]	WEAK_3	0.741	0.451
Futility (α = 0.880; C = 0.880)			
In my unit, there is a lot of frustration because employees feel that they cannot make a difference	FUT_1	0.840	0.294
In my unit, employees often feel that what they do does not really matter	FUT_2	0.876	0.232
In my unit, things will remain the same whatever the employees do	FUT_3	0.811	0.342
Distrust towards citizens (α = 0.726; C = 0.720)			
In my unit, employees are not very interested in the problems of the average citizen[o]	DISCIT_1	0.751	0.437
In my unit, employees feel that citizens are more inclined to obstruct police work than to help the police[p]	DISCIT_2	0.619	0.616
In my unit, citizens are considered untrustworthy[q]	DISCIT_3	0.664	0.559
Rule orientation (α = 0.833; C = 0.846)			
In my unit, it is considered important that employees comply with rules and procedures[r]	RULE_1	0.870	0.244
In my unit, it is very important to strictly observe the rules and procedures of my organisation[s]	RULE_2	0.865	0.253
In my unit, the first question asked when taking decisions is whether the rules and procedures are being violated[t]	RULE_3	0.666	0.556
Internal positional authority (α = 0.625; C = 0.625)			
In my unit, our accountability to the supervisor(s) is always required	AUTH_1	0.639	0.592
In my unit, the decision-making power you have depends on your position within the organisation and within the department[u]	AUTH_2	0.556	0.691
In my unit, lower-rank employees are not allowed to question certain instructions[v]	AUTH_3	Excluded from analysis	
In my unit, respect for the formal authority of the supervisor(s) is very important	AUTH_4	0.599	0.641
Law enforcement orientation (α = 0.740; C = 0.751)			
In my unit, we consider the upholding of the law very important	LAW_1	0.861	0.259
In my unit, it is considered important that citizens comply with the law	LAW_2	0.684	0.533
In my unit, citizens are considered subordinates who should obey	LAW_3	Excluded from analysis	

Notes: [a]The items presented here were originally in Dutch. For the purpose of this paper, the items were translated to English by a professional translator. This translation was then evaluated by the researchers and any differences were discussed and adjudicated upon by the translator and the researchers; [b]Slightly adapted from an item of Maesschalck (2004); [c]Slightly adapted from an item of Maesschalck (2004); [d]Slightly adapted from an item of Wouters and Maesschalck (2014); [e]Slightly adapted from an item of Wouters and Maesschalck (2014); [f]Slightly adapted from an item of Cochran and Bromley (2003); [g]Slightly adapted from an item of Wouters (2016); [h]Slightly adapted from an item of van Muijen *et al.* (1999); [i]Slightly adapted from an item of Victor and Cullen (1987); [j]Slightly adapted from an item of Victor and Cullen (1987); [k]Slightly adapted from an item of Trevino and Weaver (2001); [l]Slightly adapted from an item of Wouters (2016); [m]Slightly adapted from an item of Wouters (2016); [n]Slightly adapted from an item of Thoroughgood *et al.* (2012); [o]Slightly adapted from an item of Coughlin and Lockhart (1998); [p]Slightly adapted from an item of Regoli *et al.* (1991); [q]Slightly adapted from an item of Cochran and Bromley (2003); [r]Slightly adapted from an item of Victor and Cullen (1987); [s]Slightly adapted from an item of Victor and Cullen (1987); [t]Slightly adapted from an item of Maesschalck (2004); [u]Slightly adapted from an item of Wouters and Maesschalck (2014); [v]Slightly adapted from an item of Wouters and Maesschalck (2014)

Table II.

who should obey) had a negative factor loading for the dimension "law enforcement orientation" instead of a positive one. This item thus seemed to be a bad indicator for that dimension (even when the item was reverse coded) and was therefore omitted from the model. A second model, without item LAW_3, had slightly better fit statistics (RMSEA = 0.043; CFI = 0.946; TLI = 0.938), but showed high cross loadings for the item AUTH_3 (In my unit, lower-rank employees are not allowed to question certain instructions) on the dimensions "organisational injustice", "weak supervisory support" and "internal distrust". Item AUTH_3 was therefore also removed from the model. A third model, estimated without items LAW_3 and AUTH_3, had a good fit (RMSEA = 0.041; CFI = 0.953; TLI = 0.946). Further inspection of the factor loadings and modification indices showed no remaining problems. The CFA thus largely confirmed the hypothesised 15-dimensional model. Table II now presents the resulting model with 15 dimensions and 48 items. As this table shows, all factor loadings score above the 0.4 minimum proposed by Hair *et al.* (1998). The Cronbach's α and composite reliability scores for each dimension are also shown in Table II[8]. In total, 14 dimensions score above 0.70. One dimension ("internal positional authority") scores below 0.70 but above 0.60 (i.e. 0.625). These values indicate acceptable to good reliability (Hair *et al.*, 1998).

An assessment of agreement within work units and of variation between work units not only provides us an indication of the sensitivity of the measurement instrument, it can also invite further reflection. Our assessment here follows the approach used by Ingram *et al.* (2013), also used in a police context. First, within-unit agreement is assessed by means of average deviation indices around the mean (ADM) (Burke *et al.*, 1999). Burke and Dunlap (2002) suggested ADM values of 1.2 or less for a seven-point Likert scale to indicate acceptable levels of agreement. ADM values are calculated for all work units separately after which the overall mean of these ADM values was calculated. Table III shows the latter first and then shows the percentage of work units with an ADM value below 1.2. All this

| | Within-unit agreement | | Between-unit variation | | | | |
| | | | Model 1 work unit | | | Model 2 work unit nested in police force | |
Cultural dimension	Overall ADM value	% of work units with ADM values < 1.2	ICC work unit	Variance component	SE	Variance component	SE
Internal solidarity	0.85	78.7	0.238	7.892*	0.887	7.956*	0.823
Organisational reputation	0.72	92.4	0.134	1.491*	0.234	1.528*	0.230
Internal consensus	0.86	82.2	0.171	2.777*	0.362	2.822*	0.433
Citizen orientation	0.72	92.9	0.107	1.013*	0.169	1.033*	0.188
Rule pragmatism	0.83	87.0	0.080	1.327*	0.277	1.336*	0.358
Results orientation and competition	0.89	83.9	0.103	1.365*	0.259	1.365*	0.264
Self-interest	0.94	71.3	0.169	3.339*	0.387	3.383*	0.378
Internal distrust	0.94	73.6	0.244	11.923*	1.196	11.921*	1.193
Organisational injustice	0.86	81.2	0.202	3.355*	0.384	3.388*	0.425
Weak supervisory support	0.96	69.5	0.242	5.015*	0.471	4.982*	0.520
Futility	0.92	77.1	0.228	4.191*	0.399	4.212*	0.460
Distrust towards citizens	0.76	92.9	0.125	1.124*	0.170	1.157*	0.164
Rule orientation	0.68	95.1	0.115	1.016*	0.153	1.051*	0.174
Internal positional authority	0.83	88.5	0.123	1.171*	0.187	1.206*	0.168
Law enforcement orientation	0.63	97.0	0.092	0.302*	0.055	0.298*	0.063

Notes: Analyses are based on 3,729 respondents in 607 work units. *$p \leqslant 0.001$

Table III.
Results of the within-unit agreement and between-unit variation analyses

shows that the level of within-unit agreement varies but tends to be high. Second, between-unit variation was assessed by means of one-way, random effects ANOVA models in Mplus with the cultural dimensions as the outcomes and the work unit as cluster variable (Ingram *et al.*, 2013). The results of these analyses (Model 1) are reported in the middle part of Table III. The fourth column shows the intraclass correlation coefficients (ICC) for the work unit level. These ICC values indicate the proportion of total variation in the cultural dimensions that can be attributed to the work unit level. Bliese (2000) observed in prior applied field research that ICC values are typically between 0.05 and 0.20. The results indicate that between 8.0 (rule pragmatism) and 24.4 per cent (internal distrust) of the variation can be explained by the work unit. It is interesting to compare those latter figures with the results of Ingram *et al.* (2013) and Ingram and Terrill's (2014) research on police officers' occupational attitudes. Although their definition of work unit and the concepts they measured were slightly different, they also found the work unit to explain considerable variation (between 6 and 17 per cent). The fifth column shows the between-unit variance components and their level of statistical significance. All this shows that all cultural dimensions vary significantly across work units. In order to test whether this variation across work units is independent of the higher organisational (police force) level, we followed Ingram *et al.*'s (2013) approach and conducted adjusted random effects ANOVA models that account for the nesting of work units within police forces. This was done by means of the two-level complex function in Mplus. The right hand side columns of Table III report the results of these analyses (Model 2). These show that the between-unit variation remains after controlling for the higher organisational level. This all leads us to conclude that the instrument is indeed sensitive enough to identify variation between work units.

It is also useful to take a closer look at within-unit agreement and between-unit variation for each of the dimensions. For example, between-unit variation tends to be slightly lower for dimensions associated with traditional police culture (e.g. law enforcement orientation, results orientation and distrust towards citizens) than for the newly added dimensions (e.g. weak supervisory support, futility, organisational injustice, self-interest and internal consensus). A notable exception is internal solidarity: while this was associated with traditional police culture, it tends to show much variation across work units. Another, related, observation is that dimensions that are related to the unit or organisational level (e.g. weak supervisory support, organisational injustice and internal distrust) tend to exhibit more between-unit variation than dimensions that are more related to characteristics of police work (e.g. law enforcement orientation, citizen orientation and distrust towards citizens). Likewise, and in line with earlier findings by Zohar and Luria (2005), dimensions associated with the work unit level show more variation at work unit level than dimensions associated with the organisational level. The former (e.g. weak supervisory support, internal distrust and internal solidarity) might be shaped by unit supervisor or by immediate colleagues, while the latter (e.g. rule orientation and results orientation) might be rather shaped by "organisation-level formalisation" (Zohar and Luria, 2005). It is also interesting to go back to the original representation of the framework (Figure 1) and particularly to the "group" axis. Our results show that within-unit agreement is higher for the dimensions on the right (high) side of the group axis (e.g. law enforcement orientation, organisational reputation and citizen orientation) than for the dimensions on its left (low) side (e.g. self-interest, internal distrust and futility). Thus, as one might expect from grid-group cultural theory, agreement is stronger for high-group than for low-group dimensions.

5. Conclusion

This paper started from the observation that police culture is at the same time one of the most frequently used and one of the most criticised concepts in police studies. We argue that this paradox can be addressed by expanding "police culture" to a more generic and theory-driven

conceptualisation of "organisational culture in the police". Building on the grid-group framework, we proposed a 15-dimensional model of organisational culture. This conceptualisation encompasses aspects of traditional police culture (e.g. solidarity, results-orientation, law-enforcement orientation), but combines these with many other aspects that were also found in police organisations (e.g. self-interest and citizen orientation). Rather than assuming that these dimensions constitute characteristics that will all score high in police organisations, we hypothesised that police organisations will differ in their scores on these dimensions. A measurement instrument, the "Leuven Organisational Culture Questionnaire (LOCQ)", was developed to measure these 15 dimensions. This instrument, containing 50 items assessed by means of a seven-point Likert scale, was tested in 64 local police forces in Belgium. Confirmatory factor analyses showed that two items were not a good indicator for the cultural dimension they assumed to measure. The remaining 48 items delivered a model with a good fit and good reliability for the 15 scales. Assessments of within-unit agreement and between-unit variation show that the LOCQ is sufficiently sensitive to identify differences between work units. A closer look at the variation of the actual dimensions shows that traditional police culture characteristics tend to vary slightly less than the other characteristics. It also shows that there is less variation for characteristics related to police work than for characteristics associated with the unit or the organisational level. Also, and not surprisingly, dimensions associated with the work unit level (e.g. weak supervisory support, internal distrust and internal solidarity) show more variation at work unit level than dimensions associated with the organisational level (e.g. rule orientation and results orientation). Dimensions associated with the high-group position in Figure 1 tend to show more within-unit agreement than dimensions associated with the low-group position.

While the 48-item instrument is ready for use in further research, it still has some limitations. First, the dimension "law enforcement orientation" now only contains two items. While this might be statistically acceptable (Kelloway, 2015), it would be better to add one or two more items. Second, although there are good reasons to use the work unit as referent (see above), this does take away the relevance of the dynamics and characteristics that play at the organisational level. For example, while trust within the units might be high, trust between units, between hierarchical levels (e.g. street cops vs management cops (Reuss-Ianni, 1983)) or between "blue" and civilian staff might be low. Items referring to the organisational level could explicitly ask for such tensions. Finally, it was not possible within the scope of this paper to assess the convergent validity of the LOCQ. Future research should analyse to what extent the LOCQ corresponds with other instruments designed to measure traditional police culture (e.g. Cochran and Bromley, 2003; Paoline, 2004; Terpstra and Schaap, 2013) or organisational culture in general (e.g. Cooke and Lafferty, 1987; Denison and Mishra, 1995).

In addition to those further steps in methodological development, there are also many opportunities for more substantive research. The LOCQ could be used to map cultural variation within the police occupation e.g. between different specialisations within the police, between local or regional organisations or between national police systems. Thanks to its generic nature, it could also be used to compare the culture in police organisations with that in other organisations. For example, previous research found interesting similarities between public and private police organisations on dimensions of their occupational culture such as group loyalty and attitude towards the public (Loyens, 2009). Future research could even look further, comparing the police culture with that of organisations in, for example, social work or commercial environments. In addition, being embedded in the grid-group framework and theory, the LOCQ allows for testing some of the hypotheses in the grid-group cultural theory tradition. Maesschalck (2004), for example, has drawn from grid-group cultural theory to develop hypotheses that link particular cultural dimensions with particular types of employee misconduct. This approach relies on the hypothesis that

each of the cultural dimensions has its own built in weaknesses that might in turn result in excesses, such as employee misconduct, unless the other cultural dimensions compensate for these excesses (Thompson *et al.*, 1990). A strong prevalence of the dimension "internal solidarity", for example, could result in excessive protection of colleagues (e.g. covering up colleagues' misconduct), but the dimension "self-interest" could compensate for this weakness with its emphasis on personal benefits and self-protection. The LOCQ allows researchers to test and further develop such hypotheses.

The LOCQ could also be very useful for practitioners, both within the police and beyond. First, the cultural profile (i.e. the combined score on all 15 dimensions) of a unit draws a very informative picture about that unit. This will be particularly helpful when it is used as a tool for benchmarking with other units. Second, if the theories about the impact of organisational culture on behavioural outcomes such as misconduct would be corroborated, the LOCQ picture of an organisation would also inform practitioners on the behavioural outcomes they can expect.

Acknowledgements

Notes

1. The literature on grid-group cultural theory usually refers to "types" rather than "dimensions". Yet, in the context of organisation studies, this might be confusing. These four "types" are not empirical types or classes in which real-life organisations can be classified. Instead, they are dimensions and any given real-life organisations will exhibit a profile that combines scores on those dimensions.

2. This framework builds on Wouters' (2016) operationalisation of organisational culture, which she developed to explain employee misconduct. Drawing from existing frameworks of (ethical) culture and climate (particularly Quinn and Rohrbaugh's (1981) competing values framework, Victor and Cullen's (1987) ethical climate theory, Trevino's (1990) ethical culture conceptualisation and Kaptein's (2008) corporate ethical virtues model) and Maesschalck's (2004) application of grid-groud cultural theory on organisational culture, Wouters (2016) first hypothesised 18 dimensions and then confirmed this 18-dimensional model by means of confirmatory factory analyses. The authors of the current paper performed additional exploratory analyses (including multidimensional scaling on Wouters' data set) and did an extensive additional literature review, also including insights from organisational culture more broadly (e.g. Cooke and Lafferty, 1987; Denison and Mishra, 1995) and the police culture literature (e.g. Cochran and Bromley, 2003; Paoline, 2004; Terpstra and Schaap, 2013). This all resulted in the 15-dimensional framework depicted in Figure 1.

3. In addition to the organisational culture measure reported here, the survey also included a measure of knowledge and perceptions of integrity management (preceding the organisational culture section) and a victim-, observer- and self-report of police misconduct (following the organisational culture section). For more information on the survey and its administration, see Maesschalck *et al.* (2016).

4. The online questionnaire presented the items in eight separate blocks, corresponding to the eight positions depicted by the dots in Figure 1. Within each of these blocks, the order of the items was randomized with different respondents viewing the items in a different order.

5. The participating police forces were asked to assign each of the participating employees to one "work unit". The latter was defined in the same way as in the survey. This resulted in 725 work units available for analysis (distributed across 64 organisations). The response rates within the units varied from 7.1 to 100 per cent. Specifically, there were between 1 and 42 respondents with an average of 5 respondents per work unit. In total, 118 work units (16.3 per cent) only had one respondent, 587 work units (810 per cent) had 2 to 20 respondents and 20 work units (3.4 per cent) had more than 20 respondents. The 118 units with only one respondent were excluded from the within-unit agreement and between-unit variation analyses.

6. The maximum likelihood (ML) estimation is the default setting in Mplus and is suitable for continuous, normally distributed data. Even with minor violations of the normality assumption, the ML estimation can be used (Raykov and Marcoulides, 2006).

7. For assessing the model fit, we used three fit indices: the root mean square error of approximation (RMSEA) (Steiger and Lind, 1980), the comparative fit index (CFI) (Bentler, 1990) and the Tucker–Lewis Index (TLI) (Tucker and Lewis, 1973). Several guidelines for interpreting model fit based on these indices are available. Overall, a model is said to have an acceptable fit when the RMSEA has a value less than 0.08 or 0.10 and the CFI and TLI have a value above 0.90. A model is said to have a good fit when the RMSEA has a value less than 0.05 and the CFI and TLI have a value above 0.95 (Hu and Bentler, 1999; Van de Schoot $et\ al.$, 2012). The χ^2 Test of Model Fit was not used since this test is very sensitive to large sample sizes (Cheung and Rensvold, 2002). Consequently, with large samples (as is the case in this study) this test will be almost always significant and thus refer to a poorly fitting model (Kelloway, 2015).

8. By omitting item LAW_3 from the model, the dimension "law enforcement orientation" only consists of two items. Kelloway (2015) states that this is no problem if the sample is sufficiently large, which is the case in this study.

References

Banton, M. (1964), *The Policeman in the Community*, Tavistock, London.

Bentler, P.M. (1990), "Comparative fit indexes in structural models", *Psychological Bulletin*, Vol. 107 No. 2, pp. 238-246.

Bliese, P.D. (2000), "Within-group agreement, non-independence, and reliability: implications for data aggregation and analysis", in Klein, K.J. and Kozlowski, S.W.J. (Eds), *Multilevel Theory, Research, and Methods, Organizations: Foundations, Extensions, and New Directions*, Jossey-Bass, San Francisco, CA, pp. 349-381.

Brogden, M. and Shearing, C.D. (1993), *Policing for a New South Africa*, Routledge, London.

Brough, P., Chataway, S. and Biggs, A. (2016), "'You don't want people knowing you're a copper!' A contemporary assessment of police organisational culture", *International Journal of Police Science and Management*, Vol. 18 No. 1, pp. 28-36.

Burke, M.J. and Dunlap, W.P. (2002), "Estimating interrater agreement with the average deviation index: a user's guide", *Organizational Research Methods*, Vol. 5 No. 2, pp. 159-172.

Burke, M.J., Finkelstein, L.M. and Dusig, M.S. (1999), "On average deviation indices for estimating interrater agreement", *Organizational Research Methods*, Vol. 2 No. 1, pp. 49-68.

Cain, M. (1973), *Society and the Policeman's Role*, Routledge and Kegan Paul, London.

Campeau, H. (2015), "Police culture at work: making sense of police oversight", *British Journal of Criminology*, Vol. 55 No. 4, pp. 669-687.

Campeau, H. (2019), "Institutional myths and generational boundaries: cultural inertia in the police organisation", *Policing and Society*, Vol. 29 No. 1, pp. 69-84.

Chan, D. (1998), "Functional relations among constructs in the same content domain at different levels of analysis: a typology of composition models", *Journal of Applied Psychology*, Vol. 83 No. 2, pp. 234-246.

Chan, J. (1997), *Changing Police Culture. Policing in a Multicultural Society*, Cambridge University press, Cambridge.

Chan, J. (2007), "Police stress and occupational culture", in O'neill, M.M., Marks, M. and Singh, A. (Eds), *Police Occupational Culture: New Debates and Directions*, Elsevier, Amsterdam, pp. 129-152.

Charman, S. (2017), *Police Socialisation, Identity and Culture: Becoming Blue*, Palgrave Macmillan, London.

Cheung, G.W. and Rensvold, R.B. (2002), "Evaluating goodness-of-fit indexes for testing measurement invariance", *Structural Equation Modeling*, Vol. 9 No. 2, pp. 233-255.

Cochran, J.K. and Bromley, M.L. (2003), "The myth (?) of the police sub-culture", *Policing: An International Journal of Police Strategies and Management*, Vol. 26 No. 1, pp. 88-117.

Cockcroft, T. (2012), *Police Culture: Themes and Concepts*, Routledge, London.

Cooke, R. and Lafferty, J. (1987), *Organizational Culture Inventory (OCI)*, Human Synergistics, Plymouth, MI.

Cordner, G. (2017), "Police culture: individual and organizational differences in police officer perspectives", *Policing: An International Journal of Police Strategies & Management*, Vol. 40 No. 1, pp. 11-25.

Coughlin, R.M. and Lockhart, C. (1998), "Grid-group theory and political ideology: a consideration of their relative strengths and weaknesses for explaining the structure of mass belief systems", *Journal of Theoretical Politics*, Vol. 10 No. 1, pp. 33-58.

Crank, J.P. (2004), *Understanding Police Culture*, 2nd ed., Anderson, Cincinnati, OH.

Denison, D.R. and Mishra, A.K. (1995), "Toward a theory on organizational culture and effectiveness", *Organization Science*, Vol. 6 No. 2, pp. 204-223.

Douglas, M. (1970), *Natural Symbols: Explorations in Cosmology*, Random House, New York, NY.

Faull, A. (2018), *Police Work and Identity: A South African Ethnography*, Routledge, Oxon.

Greene, J.R. (2007), *The Encyclopedia of Police Science*, 3rd ed., Routledge, New York, NY.

Gross, J.L. and Rayner, S. (1985), *Measuring Culture. A Paradigm for the Analysis of Social Organization*, Columbia University Press, New York, NY.

Hair, J.F., Anderson, R.E. and Tatham, R.L. (1998), *Multivariate Data Analysis*, Prentice-Hall, Upper Saddle River, NJ.

Hendriks, F. and Van Hulst, M. (2016), "Shifting repertoires: understanding cultural plurality in policing", *Innovation: the European Journal of Social Science Research*, Vol. 29 No. 2, pp. 161-176.

Herbert, S. (1998), "Police culture reconsidered", *Criminology*, Vol. 36 No. 2, pp. 343-369.

Holdaway, S. (1983), *Inside the British Police: A Force at Work*, Basil Blackwell, Oxford.

Hood, C. (1998), *The Art of the State. Culture, Rhetoric, and Public Management*, Clarendon Press, Oxford.

Hu, L. and Bentler, P.M. (1999), "Cutoff criteria for fit indexes in covariance structure analysis: conventional criteria versus alternatives", *Structural Equation Modeling*, Vol. 6 No. 1, pp. 1-55.

Ingram, J.R. and Terrill, W. (2014), "Relational demography and officer occupational attitudes: the influence of workgroup context", *Journal of Criminal Justice*, Vol. 42 No. 4, pp. 309-320.

Ingram, J.R., Paoline, E.A.I. and Terrill, W. (2013), "A multilevel framework for understanding police culture: the role of the workgroup", *Criminology*, Vol. 51 No. 2, pp. 365-397.

Ingram, J.R., Terrill, W. and Paoline, E.A.I. (2018), "Police culture and officer behavior: application of a multilevel framework", *Criminology*, Vol. 56 No. 4, pp. 780-811.

Kaptein, M. (2008), "Developing and testing a measure for the ethical culture of organizations: the corporate ethical virtues model", *Journal of Organizational Behavior*, Vol. 29 No. 7, pp. 923-947.

Kelloway, E.K. (2015), *Using Mplus for Structural Equation Modeling: A Researcher's Guide*, Sage, Thousand Oaks, CA.

Kozlowski, S.W.J. and Bell, B.S. (2003), "Workgroups and teams in organizations", in Borman, J.C., Ilgen, D.R. and Kilmoski, R.J. (Eds), *Handbook of Psychology: Industrial and Organizational Psychology*, Wiley, London, pp. 333-375.

Loftus, B. (2009), *Police Culture in a Changing World*, Oxford University Press, Oxford.

Loftus, B. (2010), "Police occupational culture: classic themes, altered times", *Policing and Society*, Vol. 20 No. 1, pp. 1-20.

Loyens, K. (2009), "Occupational culture in policing reviewed. A comparison of values in the public and private police", *International Journal of Public Administration*, Vol. 32 No. 6, pp. 461-490.

Loyens, K. (2012), *Integrity Secured. Understanding Ethical Decision Making among Street-level Bureaucrats in the Belgian Labor Inspection and Federal Police*, KU Leuven, Leuven.

Loyens, K. (2013a), "Towards a custom-made whistleblowing policy: using grid-group cultural theory to match policy measures to different styles of peer reporting", *Journal of Business Ethics*, Vol. 114 No. 2, pp. 239-249.

Loyens, K. (2013b), "Why police officers and labour inspectors (do not) blow the whistle: a grid group cultural theory perspective", *Policing: An International Journal of Police Strategies and Management*, Vol. 36 No. 1, pp. 27-50.

Loyens, K. (2016), "How police detectives deal with policy alienation in the investigation of human exploitation crimes. Reinforcing or counterbalancing fatalism", in Burke, T. (Ed.), *Stress in Policing: Sources, Consequences and Interventions*, Routledge, New York, NY, pp. 137-152.

Maesschalck, J. (2004), *Towards a Public Administration Theory on Public Servant's Ethics*, Katholieke Universiteit Leuven, Leuven.

Maesschalck, J., Paesen, H. and Wouters, K. (2016), "The 'integrity at work' survey within the Belgian federal government", in Lamboo, T., Van Dooren, W. and Heywood, P. (Eds), *Prime Witnesses? Case Studies of Staff Assessments for Monitoring Integrity in the European Union*, Dutch Ministry of the Interior and Kingdom Relations, The Hague, pp. 29-38.

Mars, G. (2006), "Changes in occupational deviance: scams, fiddles and sabotage in the twenty-first century", *Crime, Law and Social Change*, Vol. 45 Nos 4/5, pp. 285-296.

Myhill, A. and Bradford, B. (2013), "Overcoming cop culture? Organizational justice and police officers' attitudes toward the public", *Policing: An International Journal of Police Strategies & Management*, Vol. 36 No. 2, pp. 338-356.

Nickels, E.L. and Verma, A. (2008), "Dimensions of police culture: a study in Canada, India, and Japan", *Policing: An International Journal of Police Strategies and Management*, Vol. 31 No. 2, pp. 186-209.

Ostroff, C. and Schulte, M. (2014), "A configural approach to the study of organizational culture and climate", in Schneider, B. and Barbera, K.M. (Eds), *The Oxford Handbook of Organizational Climate and Culture*, Oxford University Press, New York, NY, pp. 532-552.

Paoline, E.A.I. (2003), "Taking stock: toward a richer understanding of police culture", *Journal of Criminal Justice*, Vol. 31 No. 3, pp. 199-214.

Paoline, E.A.I. (2004), "Shedding light on police culture: an examination of officer's occupational attitudes", *Police Quarterly*, Vol. 7 No. 2, pp. 205-236.

Paoline, E.A.I., Myers, S.M. and Worden, R.E. (2000), "Police culture, individualism, and community policing: evidence from two police departments", *Justice Quarterly*, Vol. 17 No. 3, pp. 575-605.

Prenzler, T. (1997), "Is there a police culture?", *Australian Journal of Public Administration*, Vol. 56 No. 4, pp. 47-57.

Punch, M. (1985), *Conduct Unbecoming: The Social Construction of Police Deviance and Control*, Tavistock, London.

Quinn, R.E. and Rohrbaugh, J. (1981), "A competing values approach to organizational effectiveness", *Public Productivity Review*, Vol. 5 No. 2, pp. 122-140.

Rautiainen, A., Urquia-Grande, E. and Munoz-Colomina, C. (2017), "Institutional logics in police performance indicator development: a comparative case study of Spain and Finland", *European Accounting Review*, Vol. 26 No. 2, pp. 165-191.

Raykov, T. and Marcoulides, G.A. (2006), *A First Course in Structural Equation Modeling*, 2nd ed., Lawrence Erlbaum Associates, Mahwah, NJ.

Regoli, B., Culbertson, R.B. and Crank, J.P. (1991), "Using composite measures in police cynicism research: an application of canonical factor regression", *Journal of Quantitative Criminology*, Vol. 7 No. 1, pp. 41-58.

Reiner, R. (2010), *The Politics of The Police*, 4th ed., Oxford University Press, Oxford.

Reiner, R. (2017), "Is police culture cultural?", *Policing: A Journal of Policy and Practice*, Vol. 11 No. 3, pp. 236-241.

Reuss-Ianni, E. (1983), *Two Cultures of Policing: Street Cops and Management Cops*, New Brunswick Transaction, New Brunswick and London.

Reynolds, P.D., Fitzgerald, B.A. and Hicks, J. (2018), "The expendables: a qualitative study of police officers' responses to organizational injustice", *Police Quarterly*, Vol. 21 No. 1, pp. 3-29.

Rubinstein, J. (1973), *City Police*, Farrar, Straus, and Giroux, New York, NY.

Sklansky, D.A. (2007), "Seeing blue: police reform, occupational culture, and cognitive burn-in", in O'Neill, M.M., Marks, M. and Singh, A. (Eds), *Police Occupational Culture: New Debates and Directions*, Elsevier Science, Oxford, pp. 19-45.

Skolnick, J.H. (2005), "A sketch of the policeman's 'working personality'", in Newburn, T. (Ed.), *Policing: Key Readings*, Willan Publishing, Cullompton, pp. 264-279.

Steiger, J.H. and Lind, J.C. (1980), "Statistically based tests for the number of common factors", paper presented at the Psychometric Society Annual Meeting, Iowa City, IA.

Terpstra, J. and Schaap, D. (2013), "Police culture, stress conditions and working styles", *European Journal of Criminology*, Vol. 10 No. 1, pp. 59-73.

Thompson, M., Ellis, R. and Wildavsky, A. (1990), *Cultural Theory*, Westview Press, Boulder, CO.

Thoroughgood, C.N., Tate, B.W., Sawyer, K.B. and Jacobs, R. (2012), "Bad to the bone: empirically defining and measuring destructive leader behavior", *Journal of Leadership and Organizational Studies*, Vol. 19 No. 2, pp. 230-255.

Trevino, L.K. (1990), "A cultural perspective on changing and developing organizational ethics", *Research in Organizational Change and Development*, Vol. 49 No. 4, pp. 195-230.

Trevino, L.K. and Weaver, G.R. (2001), "Organizational justice and ethics program 'follow-through': influences on employees' harmful and helpful behavior", *Business Ethics Quarterly*, Vol. 11 No. 4, pp. 651-671.

Tucker, L.R. and Lewis, C. (1973), "A reliability coefficient for maximum likelihood factor analysis", *Psychometrika*, Vol. 38 No. 1, pp. 1-10.

Tummers, L., Bekkers, V. and Steijn, B. (2009), "Policy alienation of public professionals. application in a new public management context", *Public Management Review*, Vol. 11 No. 5, pp. 685-706.

Vadackumchery, J. (1999), *Police Leadership: The Inside Story*, APH Publishing, New Delhi.

Van de Schoot, R., Lugtig, P. and Hox, J. (2012), "A checklist for testing measurement invariance", *European Journal of Developmental Psychology*, Vol. 9 No. 4, pp. 486-492.

van den Berg, P.T. and Wilderom, C.P.M. (2004), "Defining, measuring, and comparing organisational cultures", *Applied Psychology. An International Review*, Vol. 53 No. 4, pp. 570-582.

van Muijen, J.J., De Witte, K., Susanj, Z., Lemoine, C., Bourantas, D., Papalexandris, N. and Turnipseed, D. (1999), "Organizational culture: the focus questionnaire", *European Journal of Work and Organizational Psychology*, Vol. 8 No. 4, pp. 551-568.

Vaughan, B. (2002), "Cultured punishments: the promise of grid-group theory", *Theoretical Criminology*, Vol. 6 No. 4, pp. 411-431.

Victor, B. and Cullen, J.B. (1987), "A theory and measure of ethical climate in organizations", in Frederick, W.C. (Ed.), *Research in Corporate Social Performance and Policy*, JAI Press, Greenwich, pp. 51-71.

Victor, B. and Cullen, J.B. (1988), "The organizational bases of ethical work climates", *Administrative Science Quarterly*, Vol. 33 No. 1, pp. 101-125.

Wasserman, R. and Moore, M.H. (1998), *Values in Policing*, Perspectives in Policing No. 8, US Departement of Justice, Washington, DC.

Whelan, C. (2016), "Organisational culture and cultural change: a network perspective", *Australian and New Zealand Journal of Criminology*, Vol. 49 No. 4, pp. 583-599.

White, R.D. (1999), "Organizational design and ethics: the effects of rigid hierarchy on moral reasoning", *International Journal of Organization Theory and Behaviour*, Vol. 2 Nos 3/4, pp. 431-456.

Willis, J.J. and Mastrofski, S.D. (2016), "Understanding the culture of craft: lessons from two police agencies", *Journal of Crime and Justice*, Vol. 40 No. 1, pp. 84-100.

Workman-Stark, A.L. (2017), *Inclusive Policing from the Inside Out*, Springer, Cham.

Wouters, K. (2016), *Cultuur aan/op het Werk. Een Onderzoek naar de Impact van Cultuur op Onethisch Werknemersgedrag*, KU Leuven, Leuven.

Wouters, K. and Maesschalck, J. (2014), "Surveying organizational culture to explore grid-group cultural theory: instrument design and preliminary empirical results", *International Journal of Organizational Analysis*, Vol. 22 No. 2, pp. 224-246.

Zohar, D. and Luria, G. (2005), "A multilevel model of safety climate: cross-level relationships between organization and group-level climates", *Journal of Applied Psychology*, Vol. 90 No. 4, pp. 616-628.

Further reading

Westley, W.A. (1970), *Violence and the Police: A Sociological Study of Law, Custom, and Morality?*, MIT Press, Cambridge, MA.

About the authors

Heidi Paesen studied Criminology at the University of Leuven (Belgium). She is now a PhD Student at the Leuven Institute of Criminology of the University of Leuven. Her dissertation focuses on the impact of organisational culture on police misconduct. Heidi Paesen is the corresponding author and can be contacted at: heidi.paesen@kuleuven.be

Jeroen Maesschalck studied Public Administration and Philosophy at the University of Ghent (Belgium) and at the London School of Economics and Political Science (UK). He holds a PhD in Social Sciences from the University of Leuven (Belgium). He is Professor at the Leuven Institute of Criminology of the University of Leuven. His research and teaching focus on public administration ethics and on management and policy making in the criminal justice system with a particular interest in policing. His publications include contributions in *Policing, Journal of Business Ethics, Administration and Society, Public Administration and Public Integrity*.

Kim Loyens studied Criminology and Public Administration at the University of Leuven (Belgium). She holds a PhD in Criminology from the University of Leuven. Currently, she is Assistant Professor at the School of Governance at the Utrecht University (Netherlands). Her research focuses on whistleblowing (policies), ethics management, and ethical decision making of street-level bureaucrats (particularly in the police and inspection agencies). Her publications include contributions in *Policing, Journal of Business Ethics, Administration and Society, International Journal of Public*.