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Abstract

The interrogation of suspects in a criminal investigation is a prosecution's most potent weapon and it is sometimes the best available evidence. Identifying the profile of an effective interrogator may improve interview performance. Data concerning personality dimensions, interviewing competencies, and communicative suspicion, a form of cognitive bias, were collected from police interrogators employed with medium and large police forces across Canada. The study confirmed the relations between several Police Interview competencies and traits from the Five Factor Model previously reported by DeFruyt, Bockstaele, Taris and Van Hiel (2006) and Smets (2009). General Communicative Suspicion (Levine and McCornack, 1991) was negatively related to many of the competencies and personality factors thought to be good indices of job performance. Results are discussed in light of the importance of evaluating the roles played by personality, competencies and cognitive biases in the context of police interrogations.

Keywords: *police interrogation, personality traits, competencies, communicative suspiciousness*

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Introduction

The interrogation of suspects is invaluable for police forces and the prosecution (Stephenson & Moston, 1994; Pearse & Gudjonsson, 1999; Gudjonsson, 2003). Sometimes it is the only investigative avenue left available to law enforcement personnel faced with solving *cold cases* where witnesses may have died, disappeared or forgotten crucial details, and where forensic evidence is lacking, no longer exists or has been destroyed. Baldwin & McConville (1980) found that forensic evidence was either unavailable or not important in 95% of cases in England, and Horvath & Meesig (1996) concluded that forensic clues were gathered in only 10% of offences investigated by police in the United States.

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In light of the importance placed on the potential evidence arising out of an interrogation, and from a personnel selection standpoint, it stands to reason that identifying the profiles of competent and suitable interrogators¹ can only benefit the general interview performance of investigative units, the crime solving rates of police services, the public's trust, and the administration of justice's repute. The literature has thus far clarified several issues with respect to the role played by a suspect's disposition (see Gudjonsson, 2003 for a complete discussion), and the function of a variety of criminological factors (see St-Yves and Deslauriers-Varin, 2009 for a review) in a custodial interrogation. However, the same cannot be said about police interrogators. While some researchers have investigated police personality, much of their focus was on police as recruits (Tenerowicz, 1992) or patrol officers (Reming, 1988) in the context of pre-employment selection or general police performance. Other topics of discussion concerned coping mechanisms, stress, substance abuse, race relations, and street level performance evaluations. Few researchers, however, have paid attention to the identification of a profile of investigators involved in the interrogation of suspects, and none have looked at this issue from a multi-dimensional point of view. The current study attempts to fill this void by examining the personality traits, competency skills, and a specific aspect of communication, communicative suspiciousness (Levine and McCornack, 1991), in Canadian criminal investigators.

Police Interrogation and Personality Dimensions

Personality dimensions have been studied quite intensively as predictors of job training and performance (Penney, David, and Witt, 2011). One of the most commonly used self-report inventory is the Five Factor Model (FFM) or The Big Five (Costa and McCrae, 1992), that proposes 5 dimensions of personality: Openness, Conscientiousness, Extraversion, Agreeableness and Neuroticism (emotional stability). The search for a "police personality" has yielded inconsistent results, and no ideal profile has emerged. A recent study from Norway (Abrahamsen and Strype, 2010) compared a group of police officers to a normative sample on the Big Five. The officers' scores were higher on agreeableness, conscientiousness and emotional stability but lower on Openness to experience. Moreover, when looking at the scores' variance, the officers showed more homogeneity on these dimensions than the normative sample.

Conscientiousness and, to a lesser extent, Emotional Stability have consistently been found to correlate with job performance both in the general public and in the police population (Barrick and Mount, 1991; Barrick, Mount and Judge, 2001). Few researchers, however, have paid attention to personality dimensions in relation to the interview and interrogation of suspects.

Baldwin (1993) painted a rather negative picture of British police interviewers. Based on an in-depth review of 600 videotaped police interviews, Baldwin concluded that police officers are rather poor interviewers and that their social skills are quite limited. His report was echoed by Sear and Stephenson (1997). Based on a sample of 19 male detectives from the London Metropolitan Police's – Criminal Investigation Division, the authors indicated that personality factors were not directly related to interviewing performance. The authors had their participants fill-in the IASR-B5 (Trapnell and Wiggins, 1990), a self-report inventory of 124 trait-descriptive adjectives, that measures five personality factors similar to the NEO-PI inventory. No relationships were found between the 5 personality factors and the participants' scores on the interviews analysed by the authors. Nonetheless, they reported that one sub-factor of the Openness scale (intellect) nearly missed significance. Furthermore, Intellectual Openness was found to be

¹ The terms interrogator and interviewer are used interchangeably and are synonyms in the Canadian police landscape.

inversely related to interviewing skills, contrary to what was expected from the results of the general literature on job performance. The authors suggested that socialization and environmental influence might affect personality patterns of police officers and that some police officers may find interviewing sufficiently stressful to the point of acting unnaturally.

Holmberg and Christianson (2002) presented evidence on the personality traits of police interrogators but from the perspective of convicted Swedish murderers and sex offenders. When asked to describe their experience as they confessed their crimes to police, the offenders characterized the interviewer's approach as respectful and humane. When they denied the alleged crimes however, they described the interviewers as dominant and aggressive. Due to the methodology employed in this study, it is impossible to know if interviewers showed humanity because convicts had confessed or convicts confessed because the interviewers showed humane qualities throughout the rapport. The same can be said of the convicts who denied their crimes and their perception of the dominance of their interviewers.

A recent study (Ono, Sachau, Deal, Englert, and Taylor, 2011) investigated the relationship between the FFM dimensions as predictors of performance in criminal investigators. Training and job performance were assessed in a group of US Federal Crime Investigators. One specific aspect of the job performance was "interviews and interrogations". The only dimension related to training performance scores was Conscientiousness. When overall job performance was looked at, only Neuroticism came out as a significant predictor; when the diverse facets of job performance were looked at individually, only Neuroticism correlated negatively with "Interviews and Interrogations".

At the present time, the paucity of studies that have looked directly at personality dimensions in the specific context of police interviews and interrogations preclude any conclusions. Perhaps this is due to the single dimension (i.e. personality traits) approach that researchers undertook with their investigations. Interrogating suspects engages a complex web of cognitive and behavioural considerations on the part of the interrogator. We propose here to broaden the scope and introduce two other dimensions, job competency and communicative suspiciousness. The interconnectedness of these three dimensions might provide a holistic view of Canadian police interrogators.

Police Interview Competencies – PICI

DeFruyt et al. (2006) developed the Police Interview Competency Inventory (PICI) to fill a gap in the assessment of police interrogator performance. Generally speaking, Hoekstra and Van Sluijs (2003) define competencies "as constructs reflecting the interaction between an individual's expertise and his/her behavioural repertoire that are useful to perform and excel in a job. An individual's expertise is defined as a disposal of required or profitable knowledge, experience and insight to solve specific problems. Activation and application of this expertise are further shaped by the person's behavioural repertoire." (quoted in DeFruyt et al., 2006). Specifically, a competency is "the ability to perform a particular type of task effectively or respond appropriately to a particular type of problem." (Hoekstra and Van Sluijs, 2003, p.29).

The PICI contains 66 sub-competencies divided into five higher order competencies believed to be essential to conduct police interviews. DeFruyt et al. (2006) retained five components, explaining 44.43% of the variance, which held the highest loading competencies per factor. They labelled the five dimensions as: Careful-Tenacious (C-T), Controlled-Non-Reactive (CNR), Dominant-Insisting (DI), Communication (Co), and Benevolent (Be).

The first dimension, Careful-Tenacious, reflects individuals who are methodical, attentive to detail, and able to carry on a constant effort. The second one (Controlled-Non-Reactive) deals with the individual's ability to withstand pressure and the corresponding non-reactivity towards stressful situations. The third component (Dominant-Insisting) refers to a coercive style of interview where the interrogator presses the interviewee for answers. The fourth factor (Communicative) concerns the characteristics associated with good interpersonal and communication skills. The final dimension (Benevolent) describes the kind-hearted attributes of an individual.

DeFruyt et al., (2006) presented 17 interview vignettes to 230 experienced Dutch police interrogators attending a course on interview skills. The vignettes described a range of realistic interview situations that police investigators could encounter in their job. Vignettes were grouped in terms of type of case (interviewing a suspect, a witness or a victim) and type of suspect. Each participant had to 1. rate how important was each competency for each scenario presented, and 2. evaluate their own competencies by filling out the PICI questionnaire .

Overall, the Careful-Tenacious and Communicative dimensions were judged by the participants equally important for interviewing suspects, witnesses or victims. Competencies varied slightly with types of suspects. Researchers found the Controlled-Non-Reactive and Dominant-Insisting competencies to be significantly more important with suspects, and the Benevolence competency to be the least important for interrogating suspects (DeFruyt et al., 2006). In cases where the suspect was faced with clear evidence or involved in organised crime, the Dominant-Insisting competency was judged to be the most important. The Benevolence competency was considered essential for interviewing suspects of murder committed out of passion (i.e. love triangle), but least important for the interrogation of suspects of organised crime.

Investigators who described themselves as Careful-Tenacious, Dominant-Insisting and Communicative favoured interviewing suspects whereas those who viewed themselves as Controlled-Non-Reactive, Communicative and Benevolent preferred interviewing victims.

DeFruyt et al. (2006) reported that all FFM dimensions were associated with interview competencies, and all competency factors correlated with one to five dimensions of the FFM. The strength of associations varied from low to medium. Smets (2009) replicated these findings in two Belgian samples (see Table II). The PICI competencies were found to be stable across samples. Interestingly, Smets (2009) found that experience did not matter in terms of competency, except for the Benevolence factor, where senior interrogators were less accommodating and humane than junior interviewers.

There is no known study using the PICI beyond the Dutch and Belgian samples mentioned above.

Communicative Suspicion

An overly suspicious police detective might misinterpret a suspect's inoffensive statement for an attempt at deception, which would lead him to pursue aggressively a line of questioning down a path to nowhere. On the other hand, a dupable interrogator could easily accept a suspect's alibi or version of events and discontinue a meticulous examination of all the facts at the risk of overlooking crucial evidence. In most Western democracies custodial interrogations are not permitted to last beyond 24 hours. Given this legal time constraint and corresponding pressure on police to arrive at some results before triggering a motion of habeas corpus, it is important to assess suspiciousness levels of police interrogators.

Despite their close theoretical relationship, generalized communicative suspicion (GCS) is not to be misconstrued with detection of deception. Police investigators often have to make true/false judgements while interacting with suspects, witnesses or even victims. Detection of deceit is more the ability to identify truthful as well as deceitful communications. GCS is a cognitive construct looking at how the receiver of a communication processes and decodes incoming messages and other behavioural cues as suspicious (Levine and McCornack, 1991).

Levine and McCornack (1991) first advanced the notion of communicative suspicion by describing three conceptually distinct tendencies. First, some individuals have a predisposition towards the belief that others transmit deceptive messages and thus develop a generalized communicative suspicion. The second tendency, defined as state suspicion, involves those who maintain that a communication is deceptive in a given particular setting and time. The final one relates to a lie-bias, a cognitive-processing inclination to decode all incoming messages as deceptive.

This construct may be important to consider when investigating the relationships between personality dimensions and interviewing competencies in the context of police interrogations. An exceedingly suspicious (high GCS) police detective may misread a suspect's cue as an attempt to be deceitful, and lead that investigator down a wrong investigative path. A misguided interrogator could end up wasting valuable time, energy, and develop 'tunnel vision', a leading cause of wrongful convictions in Canada and elsewhere (Report on the prevention of miscarriages of justice, 2005). Conversely, a gullible interviewer (low GCS) could concur with a suspect's version of events and, in the absence of tangible contradictory evidence, accept a false statement as a reasonably truthful one. A trusting detective would end up allowing the guilty to go free, an equally unacceptable situation.

Only a handful of researchers have scrutinized the concept of "communicative suspiciousness" in police officers. Masip, Alonzo, Garrido and Anton (2005) used Levin and McCormack questionnaire to evaluate the degree of communicative suspiciousness in experienced and novice police officers and undergraduate students. Their results showed clearly that experienced officers had a higher suspiciousness score than both novice officers and undergraduate students. Masip et al. (2005) posited that officers might process information conveyed by the sender (i.e. the interviewee) in a biased manner. In other words, officers overlooked truthfulness cues, searched only for deceptive indicators, and interpreted ambiguous signals as signs of deceit (Masip et al., 2005). Masip et al. (2005) explored whether on the job experience could account for a heightened GCS. Their findings supported their hypothesis. "Experience turns police officers into distrustful individuals, and this distrust eventually turns them into excellent lie detectors, but also very poor detectors of truthfulness." (Masip et al., 2005, p. 1061). Skolnick (1994) had already pointed out that suspiciousness may lead police officers to isolate themselves from the public.

'Communicative suspiciousness' could account in part for what Meissner and Kassin (2002) labeled the "investigator bias effect" a perceptual bias towards judgments of deceit. Results from Masip et al. (2005) could also be indicative of a confirmatory strategy by police officers based on their initial credibility assessment of persons they encounter. Evidence presented by Kassin, Goldstein and Savitsky (2003) and Hill, Memon and McGeorge (2008) supports the notion that individuals change their attitude when they embrace a guilt-presumptive approach to questioning. They tend to formulate beliefs, adopt strategies or develop attitudes consistent with their presumption that the person under questioning is guilty.

In light of the above literature, the purposes of the present study were 1) to evaluate the inter-relatedness between the FFM dimensions, communicative suspiciousness (GCS) and the PICI

, and 2) to validate the findings reported by DeFruyt et al. (2006) and Smets (2009) for the PICI in a sample of Canadian police interrogators. The first two investigations were conducted on Western European populations, and it would be fruitful to ascertain the applicability of the PICI to a Canadian population.

Method

Ethics

This research was authorized by Concordia University's ethics committee (UH2009-0640). Participants provided their consent electronically on an online form. This document clearly explained the purpose of the research, the general procedure, the risks and benefits, and the conditions of participation, which included a confidentiality commitment from the experimenter. Participants received a monetary reward of \$200.00 CAD for completing all phases of the experiment. Participants, however, who completed the questionnaires while on duty did not receive any compensation since their respective departmental policy did not allow it.

Participants

A total of 60 serving police officers from across Canada initially volunteered for this study, but only 47 completed the first two questionnaires, GCS and PICI. Thirty-seven of these 47 completed the FFM as well.

Of the 47 participants, slightly less than two thirds (62%, $n = 29$) were from a large national police force, and a little more than one third (38%, $n = 18$) came from various other large and medium-sized police departments. Forty (85%) were male and seven (15%) were female. Sixty-two percent of participants ($n = 28$) were between 35 and 49 years of age, while about 18 percent ($n = 9$) were between 25 and 34, and a little more than 20 percent ($n = 10$) were 50 and older. In terms of years of service as a police officer, 38% ($n = 18$) had from 6 to 15 years, 36.2% ($n = 17$) had from 16 to 25 years, and 17% ($n = 8$) had between 26 and 35 years of service. Three (6.4%) participants had between 1 and 5 years, and another (2.0%) had over 36 years.

All participants had received some training in interrogating suspects, and were assigned to units investigating serious crimes. About half (49%, $n = 23$) indicated they had followed a course in interviewing techniques lasting 1 week, 2 weeks, or more than 3 weeks in length, and 51.0% ($n = 24$) reported having received training of less than one week. Thirty-seven (78.7%) belonged either to a sex-crime, major crime or general investigation section. These squads typically investigate homicides, sexual assaults, robberies, arsons, frauds, or large thefts. Seven (15%) investigated offences under federal statutes. Generally speaking, these may be related to drug importation, national security matters, immigrant smuggling, proceeds of crime, or stock market manipulation. Three (6.4%) participants were assigned to the investigation of serious traffic offences such as fatalities.

A large majority of participants had considerable experience interrogating suspects. Seven (15.%) stated they had been interrogating suspects from 0 to 5 years, 16 (34.%) 6 to 10 years, nine (19.1%) 11 to 15 years, eight (17%) 16 to 20 years, and five (10.6%) more than 20 years. One participant did not provide a response.

Questionnaires

Three questionnaires were administered. First, the Generalized Communicative Suspicion (GCS) Scale from Levine and McCornack (1991) measures levels of suspicion. It was created out of

three studies. The first assessed item quality, the second compared the scale with related measures to demonstrate that it was not redundant, and the third focused on the predictive utility of the GCS. Questionnaire booklets were distributed to undergraduate students registered in basic communication courses for the first two studies, while couples recruited from another communication course were used to test the GCS' prognosticative ability. From those emerged 14 Likert-type items, each consisting of a short sentence, where respondents indicate their degree of agreement with each statement on a 7-point scale ranging from 1 (*strongly disagree*) to 7 (*strongly agree*). Examples of items are 'Everyone lies, the person who says that they don't is the biggest liar of all', 'People rarely tell you what they're really thinking', or 'Most people are basically honest'.

Second, the Police Interview Competence Inventory (PICI) (De Fruyt et al., 2006) evaluates interviewing competencies. The authors retained five out of eight competencies based on a factorloading matrix of the principal component analysis after varimax rotation. The five factors had satisfactory Cronbach Alpha internal consistency coefficients, and were named: Careful-Tenacious (0.88), Controlled-Non-Reactive (0.82), Dominant-Insisting (0.83), Communicative (0.82), and Benevolent (0.84). The PICI was developed from a pool of 20 interview vignettes, each depicting a range of realistic scenarios involving suspects, victims and witnesses. The vignettes were then rated on a five-point Likert scale by subgroups, each composed of 15-20 experienced police interviewers. Overall, the PICI is made up of 66 short statements where respondents are asked to indicate, on a scale from 1 (*hardly characteristic*) to 5 (*very characteristic*), whether these are representative of themselves. Examples are 'Having good communication skills', 'Being authoritarian', or 'Remaining calm'.

The final questionnaire was the International Personality Item Pool (IPIP) from (Goldberg, Johnson, Eber, Hogan, Ashton, Cloninger, and Gough (2006)., an analog scale to the NEO-PI-R. The 300-item version was used for the current research. The alpha reliability coefficients between the IPIP (100 items) and the NEO-PI-R are strong for each of the Big-Five domains: Openness (.90), Conscientiousness (.88), Extraversion (.91), Agreeableness (.88), and Neuroticism (.91) (Goldberg et al., 2006). This research targeted French and English speaking police officers from across Canada. Thus, the GCS Scale and IPIP were translated from their original English version into French. The PICI's original version was in Flemish. It was first translated into English and then into French. A reverse translation was conducted to ensure accuracy.

Procedure

A communication was sent electronically to chiefs of 22 major police departments in Canada, asking them to disseminate an invitation to groups of officers staffed in operational squads most likely to be in a position of conducting interrogations of suspects involved in major crimes (i.e. homicide, sexual assault, robbery, fraud, arson, etc.). The PI (M.F.) was blind to the identity of the participants. The study was conducted in three phases, and each participant had to complete the first one before moving to the next. The first phase consisted of a written set of instructions on the overall procedure, a consent form, a biographic data sheet, the GCS Scale, and the PICI. Participants completed the IPIP in the second phase. The final phase involved the collection of data pertaining to the outcome of interrogation of suspects. Only the first two phases were retained for the purpose of this article.² Finally, and as per protocol, each participant was given a debriefing sheet to read.

² The initial objective of this study was to examine whether a certain police interrogator profile could predict the outcome of a real life custodial interrogation in ongoing criminal investigations. Obtaining the ground truth to independently verify the accuracy of each participant's response in

Results

The raw data were transformed into z scores, and further examination did not reveal any outliers. The data was screened for normality. Nearly all variables were normally distributed with the exception perhaps of Extroversion. The values for skewness and kurtosis for GCS was .121 (SE .388) and -1.075 (SE .759) respectively. All five PICI dimensions were normally distributed: Careful-Tenacious skewness .184 (SE .388) and kurtosis -.079 (SE .759), Controlled-Non Reactive skewness -.205 (SE .388) and kurtosis -.856 (SE .759), Dominant Insisting skewness -.536 (SE .388) and kurtosis -.105 (SE .759), Communicative skewness -.013 (SE .388) and kurtosis -.317 (SE .759), and Benevolent skewness -.371 (SE .388) and kurtosis -.028 (SE .759). Four of the Big-Five personality traits distributed normally: Conscientiousness skewness -.427 (SE .388) and kurtosis .553 (SE .759), Agreeableness skewness -.529 (SE .388) and kurtosis -.303 (SE .759), Openness skewness -.243 (SE .388) and kurtosis -.147 (SE .759), and Neuroticism skewness .768 (SE .388) and kurtosis .307 (SE .759). Finally, Extroversion was near normality with skewness of -.605 (SE .388) and kurtosis of 2.722 (SE .759). Investigators decided not to transform the data since kurtosis is within an acceptable range. Forty-seven participants completed the PICI and the GCS questionnaire. Thirty-seven of these participants completed the FFM.

Table I displays the correlations between all three scales, and table II represents a comparison of PICI and FFM correlations between the findings of DeFruyt et al. (2006), Smets (2009), and the data obtained in this study.

General Suspiciousness was negatively associated with all other variables, except Neuroticism reaching significance with Conscientiousness (-.42; $p < .01$), Cooperation (-.32) ($p < .05$), and Extraversion (-.34) ($p < .05$). GCS total score did not correlate with age, experience, police force or experience interviewing suspects.

The pattern of correlations between the FFM and the PICI in the DeFruyt et al. (2006), Smets (2009) and the current study was very similar. DeFruyt et al, (2006) found Controlled-Tenacious to correlate highly with Conscientiousness, Extraversion, and Neuroticism; this study found significant and comparable associations with Conscientiousness (.65) ($p < .01$) and Neuroticism (-.33) ($p < .05$). Controlled-NonReactive was significantly related to Conscientiousness (.59) ($p < .01$), Agreeableness (.41) ($p < .05$), and Neuroticism (-.64) ($p < .01$) in the current study, but Openness ($p = .10$) and Extraversion ($p = .06$) failed to reach significance levels while they did in the other investigations. As for Dominant-Insisting the results achieved with Conscientiousness (.35) ($p < .01$) in this study are in accord with those of Smets (2009). The results with Cooperation attained here stands in harmony with both other research in terms of directionality and relative strength. Finally, Benevolence correlated significantly with Conscientiousness (.33) ($p < .05$) and Agreeableness (.53) ($p < .01$), while findings in DeFruyt et al. (2006) showed a meaningful association with Agreeableness only, and Smets (2009) reached significant levels with Openness, Extraversion and Agreeableness. Despite the smaller sample size compared to De Fruyt et al. (2006) and Smets (2009), the relationships reported earlier are replicated here nonetheless.³

each operational case became an overwhelming and insurmountable obstacle. As a result, the interrogation outcomes are not reported here, only the data from the independent variables are.

³ With training and/or experience controlled, the pattern of correlations remained about the same.

Table I. *Correlations among all questionnaires variables*

	GCS	C-T	CNR	DI	Co	Be	O	C	E	A
C-T	-.232									
CNR	-.120	.617**								
DI	-.224	.319*	.149							
Co	-.316*	.650**	.657**	.507**						
Be	-.136	.435**	.487**	.086	.597**					
O	-.247	.173	.270	.067	.494**	.287				
C	-.420**	.652**	.587**	.349*	.465**	.333*	.198			
E	-.340*	.233	.309	.491**	.564**	.208	.548**	.507**		
A	-.265	.299	.410*	-.076	.323	.527**	.244	.401**	.132	
N	.197	-.331*	-.639**	-.199	-.373*	-.153	-.201	-.605**	-.485**	-.376*

*p < .05

**p < .01

Table II. *PICI-FFM correlations of DeFruyt et al., (2006), Smets (2009) and present study*

PICI/FFM	Openness			Conscientiousness			Extraversion			Agreeableness			Neuroticism		
	DeF.	S.	F&L	DeF.	S.	F&L	DeF.	S.	F&L	DeF.	S.	F&L	DeF.	S.	F&L
C-T	.02	.00	.17	.61** *	.53**	.65**	.28***	.17**	.23	.01	.07	.30	-.27***	-	-.33*
C-N-R	.24***	.06	.27	.22**	.27**	.59**	.15*	.14**	.31	.32***	.18**	.41*	-.36***	-	-.64**
D-I	.05	.05	.07	.23**	.19**	.35*	-.30***	.28**	.49**	-.39***	-	-.08	-.18*	-	-.20
Co	.18*	.22** *	.49**	.30** *	.28**	.47**	.36***	.40**	.56**	-.01	.28**	.32	-.24***	-	-.37*
Be	.10	.23**	.29	.07	.03	.33*	.04	.26**	.21	.49***	.37**	.53**	.07	.04	-.15

* p < .05, ** p < .01, *** p < .001

Figures in bold represent homogeneity of correlations in all three studies.

Discussion

An objective of this research was to validate the conceptual relationships between the personality dimensions measured by the FFM, the competencies evaluated by the Police Interview Competency Inventory, and the level of General Communicative Suspiciousness. This is the first study looking at the relationships between suspiciousness, the FFM and the PICI. In addition, the PICI was tested on a Canadian police sample for the first time. To our knowledge three experiments assessed the PICI with Belgian police samples in the past. The insight gained from this cross-sectional survey further informs on the PICI's generalizability across two different populations, geographically, culturally and linguistically.

Overall, the pattern of correlations reported in the current study between the PICI and the FFM was very similar to what was reported in the previous literature. The Careful-Tenacious competency associated significantly, with Conscientiousness and Neuroticism, in the same direction and with roughly similar strength, all in accord with De Fruyt et al., (2006) and Smets (2009). Persons scoring high in CT are more conscientious and less emotionally labile. In terms of interviewing ability, these persons would represent some of the best candidates to select from. These individuals are methodical, attentive to detail, industrious, and imperturbable. This competency, however, failed to reach significance with Extraversion where it did with the other investigators. The small sample size may explain this discrepancy. Nevertheless, the pairs of meaningful associations are theoretically consistent with each other. Finally, CT was not significant with either Openness or Agreeableness, just as the other researchers found.

With respect to the Controlled-Non-Reactive competency, the findings from this study were a near perfect replication of the results from both Dutch investigators. This competency correlated just as well, although a little stronger with the Canadian sample, with the Conscientious, Agreeableness and Neuroticism traits. The exception being with Extraversion where the association was significant in the other studies, but not here. Dutch officers were found to be more extraverted than their Canadian counterparts. Once again, the sample size here may be a contributing factor to this disparity. Nevertheless, this combination of characteristics also represents a desirable interview profile for a police investigator. High scorers in this competency would be able to withstand pressure in dealing with difficult interviewees, suspects or otherwise, being perseverant, reliable, patient and cordial, and even-tempered.

The findings for the correlations between the Dominant-Insisting competency and the Conscientiousness and Extraversion traits were coherent with the previous literature, but disagreed in regards to the Agreeableness and Neuroticism characteristics. In spite of heading in the same direction as in the Dutch experiments, the associations with the latter two attributes were not significant in the Canadian sample.

For the Communication competency, the results are directly in line with the previous literature. The personality profile of Canadian interviewers is just as consistent with the communication skill set as it is with Dutch interrogators. It is interesting to note that this ability failed to be significant with Agreeableness in all three experiments discussed so far. While it may be intuitively logical that both constructs tap into the same domains (e.g. empathy, perspective taking, having feelings), it appears the PICI items for the 'Communicative' dimension may not load with the Agreeableness personality trait, making it a distinct facet. De Fruyt et al., (2006) did observe after all that once the PICI competencies were regressed on the FFM traits, the communicative dimension explained the least amount of variance.

Finally, the Benevolent element correlated significantly with Agreeableness in this study just as it did with the other two Dutch experiments. The PICI items dealing with benevolence appear to be tapping adequately into the humanitarian angle of interviewers. On the other hand,

benevolence corresponded meaningfully with Openness and Extraversion in Smets' study, and with Conscientiousness in this current probe. The inconsistent findings between this dimension and other FFM traits warrant further investigation.

Taken together, this inquiry adds quantitative support to the existing body of literature in the validity of the PICI as an important descriptive tool of police interviewer skill set. In order of relative importance to the PICI, Conscientiousness is significantly associated with four interviewing competencies, Neuroticism with three, Extraversion and Agreeableness each with two, and Openness with one. A personality-competency pattern may be emerging between how interviewers described themselves and how these descriptions relate more specifically to competencies in their everyday work.

The PICI-FFM associations have been shown to generalize across three sets of populations of police officers from two different countries: Canada and Belgium. In addition, the PICI was used with a French sub-sample in the Canadian experiment. Given the French-English dual landscape of Canada, an obvious question necessitating further investigation is whether cultural factors exert an influence on interviewing abilities. An ideal personality and competency profile of police interviewers may not exist yet, but police agencies could be mindful of the developing research in the selection of their personnel in investigative units. Still, further replications are warranted before stronger conclusions can be reached and recommendations made.

General Communicative Suspicion had never been related to either of the PICI or the FFM. The level of suspiciousness was negatively related to the Communication competency, and Conscientiousness and Extraversion personality dimensions. In other words, the greater level of communicative suspicion on the interrogator's part, the less conscientious and extroverted he/she turns out to be. Both dimensions play an important role with several interviewing skills. This combination may be an unfavourable profile for interrogators wishing to establish a rapport with interviewees. Overall, in the current sample, the more suspicious an interrogator appears to be, the less competent in their communicative skill set, and perhaps not as conscientious in attending to appropriate cues. Negligent and disorganised interviewers with poor communication skills are more likely to interpret communication messages as generally suspicious and label them deceptive. Just as Masip et al., (2005) found in their Spanish sample, the data obtained here also leads us to ponder over the potential influence of heightened GCS on the investigator bias. Critics of confession evidence often argue that police interrogators develop guilt presumptive behaviours (Kassin et al., 2003). While Hurst and Oswald (2012) found that error weighting was a possible underlying mechanism of response bias in deception detection, our findings suggest that personality traits or interviewing competencies may have an influence as well. Further work should explore if suspiciousness can undermine the efficiency of an interrogation, and provide additional clues to the formation of lie-biases.

The GCS variable warrants a further remark. All five competencies were negatively associated with this dimension, albeit only one, communication, was significant. Similarly, all but one personality characteristics, Neuroticism, were negatively associated, two of which, Conscientiousness and Extraversion, reached significant levels. The GCS scale was developed to measure three distinct constructs related to suspicion; generalized communicative suspiciousness, situationally-aroused suspicion, and lie-bias (Levine & McCornack, 1991). It is not clear yet how suspiciousness, as a form of cognitive bias is influencing personality or interviewing constructs. It may however point to the fact that the context of police interviewing is shaping an attitude of distrust that may in the end be important to take into consideration in the training of interviewers. The current study points to the fact that personality dimensions and police competencies are not

immune to the potentially deleterious effects of contextual influences at play in police interrogations.

This study does not come without its limitations. A total of 22 police agencies throughout Canada were initially solicited. Participants came from nine police organizations. Despite being broad in scope, the small number of participants from each agency prevents this research to generalize further. Additionally, departmental policies related to training and human resources were not examined. Training varies from one province to another, and selection practices in staffing serious crime units probably differ as well from one police organization to another. Notwithstanding these methodological concerns, this study underscores the importance that personality variables of an interrogator, skill level, and degree of communicative suspiciousness could have some bearing on the outcome of an interrogation. More research is definitely necessary in this field given the crucial weight of confession evidence.

A larger sample may have yielded better results. The number of participants in this study that completed all three phases was 29. This represents a power of .40 to detect a small significant correlation. With three times the sample size, the power to detect a medium correlation would have more than doubled at .84. Additionally, the effect size of a field experiment might have been improved by selecting a more homogenous group of participants.⁴ Alternatively, a laboratory design where variables extrinsic to the interrogator (i.e. crime under investigation and the suspect) are held constant could have been an option.

Conclusion

Establishing and maintaining a positive rapport is viewed as a central component to a successful interview or interrogation (Walsh and Bull, 2012; Abbe and Brandon, 2014). The literature on interviewer profiles has drawn pertinent data from therapeutic interactions to build concepts such as the 'working alliance' (Vanderhallen, Vervaeke and Holmberg, 2011). Other researchers have proposed various techniques to build rapport (Abbe and Brandon, 2014). Whereas these attempts are certainly laudable, they usually do not address the effects that the interviewing (interrogation) context may bring to the table. The interrogation of a suspect requires the interviewer to engage with a suspect, whom he has just cautioned not to speak to satisfy a legal requirement, in order to obtain afterwards a full and frank account. This caution is often times reinforced by the instructions of legal counsel to maintain silence during the custodial interview. This kind of conversation is very much inconsistent with normal social encounters in every day life. As the results of the current study show, cognitive biases arising from the context of police work (in our case generalized suspicion) may undermine the techniques to establish rapport.

In this study, we corroborated the work of personality research in demonstrating associations between personality traits and interview competencies but there is an important caveat. Suspiciousness as well as other potential cognitive bias may have to be taken into account when attempting to build a personality-competency matrix that may be useful for the selection, training and ongoing evaluation of police interviewers. Although only suggestive at this time, it will be important to investigate to which degree the results of police interrogations are influenced not only by traditional personality factors but specific cognitive biases, like suspiciousness, that may evolve as a consequence of the investigative context.

⁴ Police participants were initially classified as successful or unsuccessful based on the outcome of their interrogations. However, this classification was not retained for the purpose of this analysis.

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