Maastricht Police Department

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Statement of John Smith

I live in a one-family house in Maastricht. I rent the house with a few other boys, because it is very expensive in this neighborhood. However, last night all the boys were not except for me. Suddenly at midnight I was woken up by a noise. The noise wasn't very loud but apparently it was loud enough to wake me up. I tried to listen more carefully, and I feel so sick what it was. So I got out of bed and looked out of the window and at first I couldn't work out what was causing the noise. My conclusion is someone at the front of the house and it seemed to be (I can't be sure) below me. I looked out of the window so I could see better and I saw two men dressed in black doing something to the downstairs window. No I looked out they climbed through the window and into the front room. I didn't get a very good look at the two men but they were both of average build and looked at pretty good shape. They both wore black hats. I looked around to see if there were any other that's but no one was anywhere around. After a little while I walked back

Valorisation Addendum
In the following valorisation addendum, five issues will be addressed regarding the current dissertation “Catching liars by listening carefully: Promises and challenges for credibility assessment”. The first point will address the relevance of the present dissertation. The second issue is concerned with the target group to whom the results of this dissertation may be relevant. The third issue deals with specific activities and services that may be derived based on the results presented in this dissertation. The fourth issue explains the innovative approach and results. The last issue explains how the results of this dissertation can be implemented in practices and which opportunities there are. I want to note that the relevance and innovative nature of the findings presented in this thesis have already been highlighted in various chapters. Nonetheless, I will shortly describe them below.

RELEVANCE OF THE RESEARCH

Investigative authorities are often confronted with deceptive suspects, with witnesses and bogus victims who raise dubious claims (e.g., fabricate traumatic stories, false insurance claims) (Greer, 2000; Gudjonsson, Sigurdsson, Asgeirsdottir, & Sigsudsottir, 2007; Lisak, Gardinier, Nicksa, & Cote, 2010). Furthermore, the first DNA exonerations in the 1990’s have shown that around 20-25% of the wrongful imprisonments resulted from false confessions (Kassin, 2012), and thus the inability of detectives to recognize these types of lies. For example, in 2013, detective Hero Brinkman interrogated a woman who was suspected of hitting another woman in the face with a broken glass. The suspect confessed to this crime, however, she had nothing to do with the incident. Brinkman did not recognize her confession as a false one. Even more so, a few months later, the actual perpetrator stepped forward and confessed to the crime. Nonetheless, Brinkman suspected her of giving a false confession and sent her home (Haenen, 2016). This is only one example in which police detectives failed to accurately detect truths and lies.

Indeed, research has shown the detection of deception to be challenging. In general, people, including trained police officers, only perform around chance level when detecting deception (Aamodt & Custer, 2006; Bond & DePaulo, 2006, 2008; Vrij & Mann, 2001). One reason is that people rely heavily on nonverbal cues when making deception verdicts (for an overview see Vrij, 2008; chapter 2 of this dissertation), regardless of a large body of research showing that deception cannot be reliably inferred from behavior (DePaulo et al., 2003; Sporer & Schwindt, 2007). Instead, it is better to rely on the verbal content when making credibility judgments (Hauch, Sporer, Michael, & Meissner, 2014; Masip, Alonso, Garrido, & Antón, 2005; Vrij, 2005, 2008b). Moreover, meta-analytic research reported a higher lie detection accuracy if the training was based on verbal cues compared with nonverbal training (Hauch et al., 2014). Consequently, con-
tent should accordingly be favored over behavior (Levine & McConrck, 2014; Masip & Herrero, 2015; Vrij, 2008b).

Several veracity assessment methods have been developed that rely specifically on the content of a statement, such as Criteria-Based Content Analysis (CBCA; Steller & Köhnken, 1989), Reality Monitoring (RM; Johnson & Raye, 1981) and the Scientific Content Analysis (SCAN; Sapir, 2005). This dissertation examined the effectiveness of these verbal credibility assessment methods; more precisely it evaluated the usefulness of SCAN as a lie detection method and investigated boundary conditions and possible improvements for verbal credibility assessment.

**TARGET GROUPS**

The findings of the current dissertation are relevant for law enforcement agencies, legal professionals and policy makers. The present work clearly shows that SCAN should not be applied by investigate authorities as a tool to assess witness’, victims’ or suspects’ credibility. First, SCAN’s inter-rater reliability was found to be disappointingly low, with an average agreement of 31%. Second, SCAN criteria were unable to accurately discriminate between truthful and fabricated statements, showing SCAN is insufficiently developed as an investigate tool. Furthermore, current findings have highlighted that even though RM and CBCA can be reliably used as a lie detection tool, and their accuracy is significantly above chance level, these methods do little to decrease the influence of biasing context information. This stresses the importance of blind raters when assessing the credibility of statements.

Furthermore, these results are relevant for the academic community and especially researchers in the field of psychology and law, deception detection and communication. We hope that the scientific community will replicate and extend our findings presented in the current dissertation.

**ACTIVITIES AND SERVICES**

This thesis has established that it is possible to distinguish between truthful and fabricated statements based on their content and linguistic features, and that it is possible to highlight these differences with the aid of verbal credibility assessment methods, such as CBCA and RM. However, the findings from this thesis emphasize that SCAN does not fulfil the necessary psychometric standards to be applied as a lie detection tool. SCAN has a weak criterion and construct validity and its inter-rater reliability is disappointingly low. Therefore, investigative authorities have been informed about these findings and have been advised to refrain from using SCAN in the future.
Additionally, the findings presented in the various chapters in this dissertation indicate that people - including police officers - still hold wrongful beliefs about which cues are diagnostic for detection deception, that verbal credibility assessment is sensitive to confirmation bias, and that a more active approach of obtaining statements shows potential for credibility assessment. Consequently, the insights gained by this line of research might be used to improve the diagnostic accuracy of verbal credibility assessment tools and to develop novel deception detection trainings primarily aimed at informing investigative authorities to shift their attention from non-verbal to more diagnostic verbal cues.

INNOVATION OF THE RESEARCH

The work presented in the current dissertation is one among the first peer-reviewed studies that investigated the validity of SCAN. Given the unstandardized nature of the SCAN method, the present dissertation first examined which SCAN criteria are most frequently used in the field. This resulted in a list of 12 unique criteria that were used a basis for further investigation of SCAN. Next, the validity of SCAN as a whole, as well as the validity of separate SCAN criteria, were investigated in multiple studies (chapters 4, 5 and 6).

Furthermore, although RM and CBCA have been widely researched in the last three decades, the current dissertation extended previous literature by investigating potentially boundary conditions and improvements for these methods. For example, information about how vulnerable these methods are to contextual bias is relevant in the light of guidelines concerning the handling of this extra-domain information. Therefore, Chapter 5 investigated to what extent credibility assessment methods were influenced by contextual information. Our findings demonstrated that contextual information influenced subsequent credibility assessment.

This dissertation also focused on improving CBCA, RM and SCAN’s accuracy by supplying participants with a model statement. Our results showed that the model statement did not increase CBCA, RM and SCAN’s accuracy, but led to other cues, which can serve a valuable addition for lie detection research.

KNOWLEDGE DISSEMINATION

The outcomes of the studies described in this dissertation have all been communicated in several ways. The studies presented in chapters 2 to 6 are all published in international peer reviewed journals. Furthermore, these chapters have been presented at several national and international conferences, which were attended by both researchers and legal professionals from around the world. Chapters 1 and 7 are adapted and
translated versions of manuscripts that were published in Dutch and Belgian journals. Also, several of the studies have evoked interest outside the scientific community, and have been presented at the annual “recherchekundige bijeenkomst Limburg”. Additionally, knowledge valorisation is and will continue to be stimulated by communicating findings through journal publications and conference presentation and other invited presentations (e.g., information sessions for judges, police detectives, police academy).
REFERENCES


