LIE DETECTION:
AN OVERVIEW OF DIFFICULTIES, PITFALLS
AND PEOPLE'S ABILITY

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REZUMAT:
Oamenii au, în general, dificultăți în a deosebi adevărul și minciuna, așa cum vom demonstra în prima parte a acestui articol. Acest aspect este validat zilnic, nu numai în cazul profanilor, ci și în cel al profesioniștilor în depistarea minciunilor (detectivi de poliție, ofițeri vamali etc.). În a doua parte a articolului vom face o trecere în revistă a numeroaselor cauze și motive pentru care oamenii sunt deficitari în a detecta adevăruri și minciuni.

People's Ability to Distinguish Truths from Lies

Lie detection studies have consistently and convincingly shown that people are generally poor at detecting deception. In a typical study, observers (normally college students) are shown videoclips of numerous liars and truth tellers and are asked to indicate after each clip whether the person was lying or telling the truth. In such a study, simply guessing would result in an accuracy rate (percentage of correct classifications) of 50%. Vrij (2000a) reviewed 37 studies published between 1980 and 2000 where college students were used as lie detectors. In most studies, the accuracy rates varied between 45 and 60 percent, and the average accuracy rate was 56.6% which is only just above the level of chance. However, in those studies observers were asked to detect truths and lies in people they did not know. It seems plausible that truth/lie detection is easier in friends or romantic partners than in strangers because we know how our friends and romantic partners normally respond when they are telling
the truth and so can perhaps use this knowledge when we attempt to detect their lies. Experimental research has indicated that people become better at detecting truths and lies in people they do not know when they are made familiar with the truthful reactions of the persons they have to judge before the lie detection task is conducted (Brandt, Miller, & Hocking, 1980a, b, 1982; Feeley, deTurck, & Young, 1995). However, there is no real support for the assumption that it is easier to detect lies in friends or lovers than in strangers (Anderson, Ansfield, & DePaulo, 1999; Vrij, 2000a). It has been argued that as relationships become more intimate, partners develop a strong tendency to judge the other as truthful, the so-called relational truth-bias heuristic (Stiff, Kim, & Ramesh, 1992). McCormack and Parks have developed and tested a model to explain this (described in Levine & McCormack, 1992). As soon as the relationship between two people intensifies, they become more confident that they can detect each other's lies (‘I know so-and-so very well, I am able to tell whether he or she is lying’). High levels of confidence will then result in the belief that the other person would probably not dare to lie (‘So-and-so had better watch out, I can detect every lie he or she tells me’). This will result in putting less and less effort into trying to discover whether that person is lying (‘I don't have to worry that much, so-and-so does not lie to me anyway’) (Stiff et al., 1992). Obviously, the less effort someone puts into trying to detect deceit, the easier it will be to dupe that person. Anderson, Ansfield and DePaulo (1999) provided additional reasons why no link between relationship closeness and accuracy at detecting deception seems to exist. They suggested that when close relationship partners attempt to detect deceit in each other, they bring to mind a great deal of information about each other. This information could well be overwhelming and the lie detector might deal with this by processing the information heuristically (referred to above but for more detail see below) instead of carefully searching for genuine cues to deceit. Another explanation is that in close relationship interactions the lie detector must simultaneously engage in social behaviour (e.g. the need to appear supportive in those interactions) and social cognition (e.g. decoding possible cues to deception). This might be too much for the lie detector and, as a result, valuable cues may remain unnoticed. A further explanation is that as relationships develop, the partners become more skilled at crafting communications uniquely designed to fool each other.
That is, throughout their interactions with their friends and partners, the liar has learned how to tell a lie in such a way that it is difficult for this particular friend or partner to detect.

Lie detection is not only difficult when adults are involved. When adults are asked to detect truths and lies in children, they do not perform much better than when they are asked to detect lies in adults (Vrij, 2002a).

Police officers often present themselves as being good lie detectors (Inbau, Reid, Buckley, & Jayne, 2001), but there is no evidence to support this claim. In a review of ten lie detection studies with professional lie catchers such as police officers (Vrij & Mann, in press, b) participants obtained an average accuracy rate of 55%. However, a limitation of all these lie detection studies with professional lie catchers is that they are artificial. In those studies, police officers typically had to detect truths

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and lies told by college students for the sake of the experiment in laboratory settings. A recent study (Mann, Vrij, & Bull, in press) addressed this limitation. In this study, 99 police officers were exposed to lies and truths told by suspects during their (videotaped) police interviews. This study obtained an accuracy rate of 65%. This was higher than generally found in more artificial studies, but still far from perfect, and errors were frequently made.

I believe that many reasons contribute to people's general poor ability to detect deceit, and will give an overview of these reasons in the next part of this article.

**Difficulties and Pitfalls in Lie Detection**

**Ostrich effect.** Some lies remain undetected because observers do not want to know the truth, because it is not in their best interests. People generally appreciate the compliments made by others about their body shape, their hairstyle, the way they are dressed, their achievements, and so on. So why bother with trying to discover whether those compliments are spoken in truth? More serious lies may also remain undiscovered because of this reason. After the scandal with Lewinsky broke, President Clinton told his aides in the White House that he did not have a sexual relationship with Monica Lewinsky. Erskine Bowles, the then White House Chief of
Staff, was more than willing to believe him. This is how he described that moment to the grand jury (*The Independent*, 14 September 1998, p. 4): "All I can tell you is: This guy who I've worked for looked me in the eye and said he did not have sexual relationships with her. And if I didn't believe him, I couldn't stay. So I believe him." Betty Currie, Clinton's secretary at the time of his presidency testified that she tried to avoid learning the details of the relationship between the President and Lewinsky. When Lewinsky said of herself and the President "As long as no one saw us - and no one did - then nothing happened.", Currie responded "I don't want to hear it. Don't say any more. I don't want to hear any more." (*The Observer*, 13 September 1998, the Starr Report, page 8). Obviously, the ostrich effect may not apply to professional lie catchers who probably would be motivated to catch liars.

**Absence of Pinocchio's nose.** Several recent reviews of deception research (DePaulo, Lindsay, Malone, Muhlenbruck, Charlton, & Cooper, 2003; Vrij, 2000a, in press, a) which analysed more than 125 deception studies, revealed one striking finding: There is not a single verbal, nonverbal or physiological cue uniquely related to deception. In other words, something similar to Pinocchio's growing nose does not exist. Obviously, this makes lie detection difficult as there is nothing the lie detector can truly rely upon. The absence of giveaway cues does not imply that liars and truth tellers always respond in the same way. In fact, they do not. However, when liars and truth tellers do respond differently, this is not the result of lying, but the result of the liar experiencing at least one of the following processes: emotion, content complexity, and attempted control (Vrij, 2000a). These processes reveal signs that can be detected by a lie detector. Each process emphasises a different aspect of deception and deceptive responses. Liars may well experience all three aspects simultaneously, and the three processes should therefore not be considered as opposing camps.

With regard to emotions, liars might feel guilty because they are lying, might be afraid of getting caught, or might be excited about having the opportunity to fool someone (Ekman, 1985/2001). Regarding content complexity, sometimes liars find it difficult to lie, as they have to think of plausible answers, avoid contradicting themselves and tell a lie that is consistent with
everything that the observer knows or might find out, whilst avoiding making slips of the tongue. Moreover, they have to remember what they have said, so that they can keep their story consistent when asked to repeat it (Burgoon, Buller, & Guerrero, 1995; Vrij, 2000a). This might be more difficult than truth telling, especially when the liar has not prepared a story and has to concoct one instantly. Also, liars continuously have to monitor their speech and nonverbal behaviour in order to appear convincing throughout their lie. This probably becomes increasingly difficult as lies increase in length and complexity. Liars may worry that engaging in deceit will increase the likelihood of them exhibiting cues that will give their lies away, and therefore may attempt to control their behaviour, suppressing such signs, engaging in impression management, that is, trying to make a convincing impression in order to avoid getting caught (Buller & Burgoon, 1996). However, this is not easy. Liars need to effectively suppress nervousness, masking evidence of having to think hard, should know how he or she normally responds in order to make an honest and convincing impression, and should display the responses he or she wants to show. It may well be the case that, when attempting to control their behaviour, liars may exhibit ‘overcontrol’, that is, displaying a pattern of behaving that will appear planned, rehearsed, and lacking in spontaneity (DePaulo & Kirkendol, 1989).

Another possible cue that may result from inadequate control of behaviour is that performances may look flat due to a lack of involvement (Burgoon & Buller, 1994; DePaulo et al., 2003). Charles Ingram, who was found guilty in the United Kingdom of cheating his way to the top prize in the popular TV quiz ‘Who wants to be a Millionaire’ might have experienced this. Staff working for the TV programme became suspicious when Ingram and his wife ‘had not appeared as jubilant as the newly rich might’ after winning the top prize of £1,000,000 (The Independent, 8 April 2003, page 9). This might have been due to a combination of fear of being caught out together with the awareness that their win was not legitimate.

Deception research has revealed evidence for all three processes. Reviews of research have revealed that several cues are associated with lying including a tendency to speak with a higher pitched voice (which might be the result of experienced arousal (emotion)); a tendency to include fewer details into their accounts (which might be the result of content complexity); and a tendency to make fewer illustrators (hand and arm movements designed to modify and/or supplement what is being said verbally) and fewer hand and finger movements (non-functional
movements of hands and fingers without moving the arms) than truth tellers (which might be the result of either content complexity or attempted control).

Perhaps a striking finding in deception research is that clear cues of nervous behaviour, such as gaze aversion and fidgeting, do not appear to be related to deception. This is striking because, as I will address later on, people, including professional lie catchers, strongly believe that liars display such cues of nervousness. However, the lack of such behaviours might be the result of the artificial nature of deception studies. They have almost exclusively been conducted in university laboratories where participants (mostly college students) tell the truth or lie for the sake of the experiment. In those situations the stakes (negative consequences of getting caught and positive consequences of getting away with the lie) are typically low. Most lies people tell in daily life are low-stakes lies (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996) and deception studies perhaps accurately reflect how people respond in such situations. However, sometimes the stakes are high for liars (and truth tellers), such as in police interviews. It might well be that liars (and truth tellers) behave differently in such situations. Police officers typically believe that guilty suspects will be afraid of getting caught (Inbau et al., 2001), and, if this is true, nervous behaviours might well occur when suspects lie during their police interviews. In a recent study, we (Mann, Vrij, & Bull, 2002) examined the behaviour displayed by 16 suspects during their police interviews. The suspects were all being interviewed in connection with serious crimes such as murder, rape and arson. Results revealed that the suspects in these high-stakes situations did not show clear stereotypical nervous behaviours such as gaze aversion and fidgeting either. In fact, they exhibited an increase in pauses and (male suspects displayed) a decrease in hand and arm movements. This is more in agreement with the content complexity and attempted control approaches than with the emotional approach. The strongest evidence that content complexity affected suspects’ behaviour more than nervousness was the finding regarding eye blinks. Suspects made fewer eye blinks when they lied. Research has shown that nervousness results in an increase in eye
blinking (Harrigan & O’Connell, 1996), whereas increased cognitive load results in a decrease in eye blinking (Wallbott & Scherer, 1991).

The apparent predominance of cognitive load processes compared to emotional processes in suspect interviews is perhaps not surprising. Many suspects have had regular contact with the police. Therefore, they are probably familiar with police interviews which might somewhat decrease their nervousness. However, suspects in police interviews are typically less intelligent than the average person (Gudjonsson, 2003). There is evidence that less intelligent people will have particular difficulty in inventing plausible and convincing stories (Ekman & Frank, 1993).

Subtle differences. Differences in behaviour between liars and truth tellers are usually very small (Vrij, 1994) and Freud’s (1959, p.94) view that ‘He who has eyes to see and ears to hear may convince himself that no mortal can keep a secret. If his lips are silent, he chatters with his fingertips; betrayal oozes out of him at every pore’ is often not correct. Obviously, the smaller the differences, the more difficult it will be to detect them. However, cues to deception may be more likely to occur when the three processes which might elicit verbal and behavioural responses to deceit (emotions, cognitive complexity, and attempted behavioural control) become more profound. Indeed, in a series of laboratory experiments where the stakes were manipulated (although the stakes were never really high), it was found that high-stakes lies were easier to detect than low-stakes lies (Vrij, 2000b) and that motivated liars (liars who really attempted not to get caught) were easier to catch than unmotivated liars (DePaulo, Blank, Swaim, & Hairfield, 1992).

The use of heuristics. Rather than actively scrutinising another’s reactions for cues to deceit, observers may instead rely on rule-of-thumb decision rules which are often called cognitive heuristics (Levine, Park, & McCormack, 1999). Person perception researchers have emphasised that this is the most effective way that observers with limited time and attentional resources deal with complex environments (Macrae & Bodenhausen, 2001). However, such heuristics easily lead to systematic errors and biases. Levine et al. (1999) refer to several
heuristics which are thought to influence veracity judgements, including the relational truth-bias heuristic (already described above), the probing heuristic, the representativeness heuristic, the availability heuristic, and the infrequency heuristic. The probing heuristic (Levine & McCornack, 2001) refers to judges' tendency to believe a source more after being probed. (Receivers have a strong belief in the efficacy of probing as a lie detection strategy. In case probing does not result in clear signs of deceit, and it often will not (Levine & McCornack, 2001), the source is more likely to be believed); the representativeness heuristic (Stiff, Miller, Sleight, Mongeau, Garlick, & Rogan (1989) is a decision rule regarding the likelihood that a particular reaction is an example of a certain category of reactions. Used in a deception context it could explain people's tendency to interpret nervous behaviour as probable signs of deceptive behaviour; the availability heuristic (O'Sullivan, Ekman, & Friesen, 1988) implies that since people are more often confronted with truths than with lies, they therefore assume that the reactions they observe are usually honest; similarly, the infrequency heuristic (Fiedler & Walka, 1993) emphasises that because lies are often undiscovered and often occur unexpectedly, people assume others to be truthful. The latter two heuristics lead to a truth bias, which is a tendency to judge more messages as truthful than deceptive (Anderson, Ansfield, & DePaulo, 1999). The truth bias particularly occurs in laypersons. The result of this truth bias is that laypersons are typically more accurate in correctly classifying truthful messages than deceptive messages (that is, if a lie detector watches five liars and five truth tellers, but indicates that all ten were telling the truth, more truths (N = 5) than lies (N = 0) will be correctly classified). Vrij's (2000a) review of lie detection studies revealed a 67% accuracy rate in truth detection but only a 44% accuracy rate in lie detection. Professional lie catchers are less prone to a truth bias (perhaps their jobs make them more suspicious) and a review of lie detection studies amongst professional lie catchers (Vrij & Mann, in press, b) revealed a 55% accuracy rate in detecting truths and a 55% accuracy rate in detecting lies.

Even more as yet unlabelled heuristics might be present in veracity judgements. For example, observers have a tendency to judge reactions which are odd or infrequent (e.g. keeping the eyes closed during a conversation, staring during the conversation, etc.) as deceptive (Bond, Omar, Pitre, Lashley, Skaggs, & Kirk, 1992).
Since Bond et al. (1992) used expectancy violation as a theoretical model for this finding, I would like to call this heuristic the ‘expectancy-violation heuristic’.

Violations of conversation rules. Social conversation rules may hamper lie detection. For example, in daily life conversations it is often seen as inappropriate if the listener asks the other to elaborate on what s/he just said, or asks the other to describe an event in reverse order (start at the end of an event and describe the event by going back in time). However, such tactics might help lie detectors (Vrij, in press, b). Also, conversation rules determine that a listener looks the speaker in the eye, yet the eyes don't reveal reliable information about deception.

The wrong cues. There are widespread, but often incorrect, beliefs about how people respond when they lie. Studies investigating how people think liars respond have revealed that observers (both laypersons and professional lie catchers) overwhelmingly expect liars to react nervously, with 'liars look away' and 'liars make grooming gestures' being the most popular beliefs (Akehurst, Köhnken, Vrij, & Bull, 1996; Mann et al., in press; Strömwall & Granhag, 2003; Taylor & Vrij, 2000; Vrij & Semin, 1996; Vrij & Taylor, 2003). For example, 75% of police officers believe that liars look away (Mann et al., 2002; Vrij & Semin, 1996), and make grooming gestures (Vrij & Semin, 1996). These findings are not surprising given the fact that police manuals typically promote the idea that liars look away and fidget (Gordon, Fleisher, & Weinberg, 2002; Hess, 1997; Inbau et al., 2001; Yeschke, 1997; Zulawski & Wicklander, 1993). However, as discussed above, empirical evidence supporting this view is lacking. It is therefore unsurprising that in their lie detection study using videoclips of suspects who lied or told the truth during their police interviews, Mann et al. (in press) found that the more the observers (who were police officers) endorsed the 'lie cues' promoted in police manuals, the worse they became at distinguishing between suspects' truths and lies. In other words, applying the information provided in those manuals appears to be counterproductive.

Apart from being taught the wrong cues, there is another reason why people typically expect nervous reactions: They believe that they show such reactions themselves when they lie. Vrij, Edward, and Bull (2001) and Vrij, Semin and Bull (1996) investigated participants' behaviour while lying and truth telling. They also asked the participants afterwards to indicate
what behaviour they thought they had exhibited when they lied and when they were telling the truth. Results showed that participants had poor insight into their own behaviour and thought that they responded more stereotypically while lying (showing gaze aversion, an increase in movements, and so on) than they in fact did. In other words, it seems that during lie detection observers look for cues they mistakenly believe they themselves show while lying.

**Overemphasis on nonverbal cues.** Another reason why I think people are typically poor lie detectors is that they don't seem to take speech content enough into account. Observers do listen to the speech content, but mainly in situations where they are knowledgeable about the topic. In that case observers can easily compare their knowledge of facts with what the speaker says. In one real life case (*the Independent*, 20 July 2001, page 3) Jeffrey Archer, a former British politician later convicted for perjury, asked three journalists to leave his hotel room during a political party conference while he took a call from the Prime Minister. Another politician who saw the three journalists pacing up and down the corridor asked them what they were doing. He immediately realised that Archer had lied to the journalists and could not be speaking to the Prime Minister on the phone, because he knew that the Prime Minister was sitting on the conference platform at that very moment. In another real life case (Mann et al., 2002), police officers asked a man who was suspected of murder about his whereabouts on a certain afternoon. The man explained in detail that he visited a market in a village near his home. The police detectives knew that this was a lie because, apparently unknown to the suspect, the market had been cancelled on that particular day. In both examples if the lie detector compares what s/he knows with what the target person says, then he or she may discover that the person is lying by paying attention to the speech content. Moreover, when police officers hear different statements from the same person about a topic, or different statements from different people about a topic, they also primarily tend to focus on speech content, checking for consistency between the different statements (Granhag & Strömwall, 1999, 2000, 2001a, b; Strömwall, Granhag, & Jonsson, 2003).
However, there is evidence that in situations where there is no information to check and only one statement is made, people, including police officers, primarily pay attention to nonverbal communication in order to form an impression (Greuel, 1992; Mehrabian, 1972; Mehrabian & Ferris, 1967; Mehrabian & Wiener, 1967; Rozelle & Baxter, 1975; Walkley, 1985; Waltman, 1983). Meissner and Kassin (2002) pointed out that in Florida, Tom Sawyer, believed to be innocent but accused of sexual assault and murder, became a prime suspect because he appeared embarrassed and his face flushed during an initial interview (see Ofshe, 1989, for a detailed description of the Tom Sawyer case). According to Kaufmann, Drevland, Wessel, Overskeid, and Magnussen (2003) judicial decisions are sometimes based on nonverbal communication, even when available evidence points in the other direction. They describe a Norwegian court trial in which, in their words (p. 22): 'although the circumstantial evidence of guilt was strong, the defendant (a financial adviser) was acquitted partly because.....his nonverbal behavior was confident without evasive eye movements of any sort'.

There are several reasons why in the latter circumstances people rely so much on nonverbal behaviour. First, it might be more noticeable than speech (DePaulo & Kirkendol, 1989; Vrij, 2000a). There are automatic links between strongly felt emotions and certain behaviours (Ekman, 1985/2001), whereas there are not such links between emotions and speech content. Anger, for example, results in several cues, including narrowing of the lips. This might well give a lie away if an angry person denies being angry. Also, we are more practiced in using words than in using behaviour (because we exchange information predominantly via words), and this practice makes perfect. The fact that words are more important than nonverbal behaviour in the exchange of information makes people also more aware of what they are saying than of how they are behaving. Suspects in police interviews and applicants

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in selection interviews will probably know and remember most of what they have said. However, it will be more difficult for them to indicate exactly how they behaved, that is, which hand movements they made, what their voice tone was like, etc. Being aware of one's own behaviour is essential when controlling behaviour, but to be effective also requires an awareness
of the behaviour one normally exhibits. Finally, although people can refrain from speech, they can't be silent nonverbally. Suppose a suspect realises during his police interview that the police know more that he thought they did about his involvement in the crime. This may imply that he will have to give a different story from that he had planned to tell. Verbally he can afford a little rest to think of an appropriate response in this awkward situation. Nonverbally, however, there is no possibility of taking a rest. He will display behaviour throughout the entire interview, even when he remains silent, and the police officers can observe and interpret this behaviour.

Second, sometimes there is little speech content to rely upon because the person just says a few words or just a couple of sentences. In such situations an observer has almost no other choice than to examine someone's behaviour.

Third, people may not know which verbal cues to pay attention to even when the target person speaks substantially. People, including professional lie catchers, may not know this because police manuals do not pay much attention to verbal aspects of speech, or in the few cases where they do mention verbal cues, do not focus on the cues which research has indicated are (to some extent) diagnostic for deception (Vrij, in press, a). Finally, influential researchers in the deception field, such as Ekman (1985/2001), don't put much emphasis on speech content either. In my opinion, speech content can reveal deception if observers pay attention to the diagnostic cues. Our own research has consistently shown that more accurate truth/lie decisions can be made when both speech content and nonverbal behaviour are taken into account instead of just speech content or just nonverbal communication (Vrij, Edward, Roberts, & Bull, 2000; Vrij, Akehurst, Soukara, & Bull, in press; Vrij & Mann, in press, a).

People do not take individual differences into account. There are large individual differences in people's speech, behaviour and physiological responses. Some people typically make many movements, whilst others do not; some people are very talkative, others are not, etc.. Another reason why people fail to catch liars is that they do not take such individual differences into account when they attempt to detect deceit. Those people whose natural behaviour looks suspicious are in a particularly disadvantageous position. Some individuals' nonverbal behaviour gives the impression that they are telling the truth (honest demeanour bias), whereas others' natural behaviour leaves the impression that they are lying (dishonest demeanour bias) (Riggio, Tucker, & Throckmorton, 1988; Riggio, Tucker, & Widaman, 1987; Vrij, 1993; Vrij & Van
Demeanour biases are related to personality traits. **Expressive people**, for example, exude credibility, regardless of the truth of their assertions. It is not that they are particularly skilled at lying, but their spontaneity tends to disarm suspicion, which makes it easier for them to get away with their lies (Riggio, 1986). On the other hand, people with a strong sense of **public self-consciousness** tend to make a less credible impression on others, regardless of whether they are telling the truth. When these individuals lie they are concerned about being scrutinised by others, which changes their behaviour in such a way that it appears dishonest. **Introverts** and **socially anxious** people also impress others as being less credible. The social clumsiness of introverts and the impression of tension, nervousness or fear that is natural for socially anxious individuals is interpreted by observers as indicators of deception. Interestingly, their demeanour seems not to accurately reflect their behaviour. For example, introverted people lie infrequently (Kashy & DePaulo, 1996). Introverts also commit fewer crimes than extraverts (Eysenck, 1984). Furthermore, socially anxious people are less likely to persist in lying when challenged (Vrij & Holland, 1998).

Various ethnic minority groups are also in a disadvantageous position due to the behaviour they naturally display. Afro-American people generally display more gaze aversion than white American people (LaFrance & Mayo, 1976), and people from Turkey and Morocco who are living in the Netherlands show more gaze aversion than native Dutch people (Vrij, 2000a; Vrij, Dragt, & Koppelaar, 1992). Such differences are, in part, caused by the fact that gaze patterns are influenced by culture, and that looking into the eyes of a conversation partner is regarded as polite in Western cultures but is considered to be rude in several other cultures (Vrij & Winkel, 1991; Vrij, Winkel, & Koppelaar, 1991).

In the Netherlands, we examined the nonverbal behavioural patterns of white Native Dutch and black Surinam Dutch citizens (citizens who originated from Surinam, a former Dutch colony, but now living in the Netherlands) during simulated police interviews (Vrij & Winkel,
Both a Native Dutch and Surinam Dutch interviewer were used, but this variable had no impact on the findings. Surinam Dutch people made more speech disturbances (speech fillers such as 'ah', 'um', 'er' and stutters), exhibited more gaze aversion, smiled more often, and made more self manipulations (scratching the head, wrists, and so on) and illustrators (described above), regardless of whether they were lying or not. These behaviours show an overlap with the behaviours that Western white people believe liars display, suggesting that typical Surinam Dutch behaviour, in these experiments in Holland, corresponds with behaviour that makes a suspicious impression on Western white observers. This gives rise to possible cross-cultural nonverbal communication errors during cross-cultural interactions. That is, nonverbal behavioural patterns that are normal and natural for Surinam Dutch people in these settings may be interpreted by Western white observers as revealing attempts to hide the truth. We tested this idea in a series of experiments (Vrij & Winkel, 1992a, 1994; Vrij et al., 1991). Videotapes were made of simulated police interviews in which Native Dutch and Surinam Dutch actors participated. Different versions were made of each interview. The actors demonstrated typical 'Native Dutch' behaviour in one version of the interviews (for example, showed a limited amount of gaze aversion) and typical 'Surinam Dutch' nonverbal behaviour in another version of the interviews (showed more gaze aversion). Native Dutch police officers were exposed to one version of each interview and were asked to indicate to what extent the actor made a suspicious impression. The actors consistently made a more suspicious impression when they demonstrated 'typical Surinam Dutch behaviour' than when they exhibited 'typical Native Dutch behaviour'.

People do not take situational differences into account. Not only do different people behave differently in the same situation (interpersonal differences), the same person also behaves differently in different situations (intrapersonal differences). Neglecting those intrapersonal differences is another error lie catchers make. Police officers are advised to examine a suspect's natural, truthful behaviour during the small-talk part at the beginning of the interview (Inbau et al., 2001). This behaviour can then be used as a baseline for the actual investigative part of the
interview. That is, behavioural patterns that differ from this truthful baseline during the actual investigative interview could then be interpreted as signs of deceit. Moston and Engelberg (1993) noticed that this technique is commonly employed in police interviews. Unfortunately, this approach is prone to incorrect judgements when such an inaccurate comparison is made. Small-talk and the actual investigation are fundamentally different situations. Small-talk conversations are low-stakes situations where the suspect's responses are unlikely to have any negative consequences. The investigative part of the interview, on the other hand, is a high-stakes situation where the suspect's responses are intensely scrutinised and where the suspect's reactions may easily heighten suspicion. Suspects are probably fully aware of this and therefore, not surprisingly, both guilty and innocent people tend to show different behaviours during small-talk compared to the actual interview (Vrij, 1995). Researchers make the same mistake also. In a rare example of a real life high-stakes deception study, Hirsch and Wolf (2001) observed 23 nonverbal and verbal cues displayed by Clinton during his Grand Jury Testimony. They examined a 23-minute segment of the videotape and compared this with 11 minutes of the same testimony when he answered basic questions (his name, his attorney's name, etc.). Significant differences were obtained for 19 cues. They also compared the 23-minute segment with 5 minutes of a fundraising speech to a sympathetic crowd. This time, 20 significant differences emerged. Unfortunately, this study tells us nothing about cues to deception. The comparisons between this 23-minute fragment and the other fragments are apple and orange comparisons. The problem with comparing responses in the actual interview with responses to simple irrelevant questions (small-talk) has already been discussed above. In addition, it is obvious that a person will show different behaviours when addressing a crowd in a fundraising speech than when interviewed about an alleged affair. In this respect, it might be more surprising that significant differences were found for only 19 or 20 cues and not for all 23 cues. In summary, for lie detection it is necessary that so-called comparable truths (Vrij, 2002b) are selected and compared with potentially deceptive parts of the interview.

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Individual differences in lie detection skills. Research has demonstrated individual differences in lie detection, with some people being better than others. For example, in Mann et al.'s (in press) study the accuracy rates for individual officers varied from a low 30% to a very high 90% (achieved by three officers, Mann, 2001). Ekman and his colleagues, who examined the lie detection ability of numerous different groups of lie detectors, found differences between groups. For example, Ekman and O'Sullivan (1991) found that police officers (56% accuracy) and polygraph examiners (56% accuracy) obtained similar accuracy rates to university students (53% accuracy), whereas members of the Secret Service were better at detecting lies than university students (64% accuracy). Ekman, O'Sullivan and Frank (1999) found that US Federal officers (police officers with a special interest and experience in deception and demeanour) and sheriffs (police officers identified by their department as outstanding interrogators) were considerably better at detecting lies (73% and 67% accuracy respectively) than 'mixed' law-enforcement officers (officers who had not been chosen because of their ability in interrogation, 51% accuracy).

How could we explain these individual differences? The ability to detect lies is not correlated with gender and age (Ekman & O'Sullivan 1991; Porter, Woodworth, & Birt, 2000; Vrij & Mann, 2001) or with lie detectors' confidence in the accuracy of their own veracity judgements (see DePaulo, Charleston, Cooper, Lindsay, & Muhlenbruck, 1997, for a meta-analysis). Mann et al. (in press) found a positive relationship between having experience in interviewing suspects and the ability to detect truths and lies, suggesting that experience does make police officers better able to distinguish between truths and lies.

In several lie detection studies the relationship between the cues people claim to pay attention to when attempting to detect deceit and their ability to distinguish between truths and lies was examined. In our own studies (Mann et al., in press; Vrij & Mann, 2001) we found that those participants (police officers in both studies) who mentioned gaze aversion and fidgeting as cues to deceit achieved the lowest accuracy scores. When other researchers examined such relationships different findings emerged. For example, Ekman and O'Sullivan (1991) found that participants who mentioned both speech cues and nonverbal cues obtained higher accuracy than those who just mentioned only speech cues or only nonverbal cues. Anderson, DePaulo, Ansfield, Tickle, and Green's (1999) and Feeley and Young (2000) found that the more vocal
cues (speech errors, speech fillers, pauses, voice) participants mentioned, the higher accuracy they obtained. Porter et al. (2000) found that the more body cues the participants reported, the better their ability to distinguish between truths and lies became. Frank and Ekman (1997) reported that good lie detectors were better at spotting brief facial expressions of emotions than poor lie detectors. Such micro expressions have not been investigated in any of the other studies discussed here.

In summary, different studies reveal different outcomes, and as a result of this, a clear picture of what distinguishes a good from a poor lie detector has yet to emerge. There are at least four explanations for the lack of consistency in the findings of different studies. One explanation is that the relationships between cues mentioned and accuracy are generally weak. Indeed, the significant correlations which are typically reported are low, usually falling into the $r = .20$ to $r = .30$ range. Another explanation is that in different studies participants faced completely different lie detection situations, and therefore comparisons are difficult to make. For example, in most studies participants were requested to detect truths and lies in low-stakes situations, whereas in some studies participants were exposed to high-stakes situations. Interestingly, in both our experiments (Mann et al., in press, and Vrij & Mann, 2001) participants were requested to detect truths and lies told during police interviews and both studies obtained similar findings. Thirdly, perhaps lie detectors simply do not know where they look, and so lie detection could just be an intuitive skill. We (Mann et al., in press) obtained some support for this assumption, as good lie detectors reported relying significantly more often on 'gut feeling' than poor lie detectors. Finally, the weak relationships between cues mentioned and ability to detect deceit and the conflicting findings between different studies may be the result of a flaw in the experimental designs used in lie detection studies. In almost all lie detection studies published to date, people's skills to detect deceit were only tested once. The fact that they were good or bad at that particular task might have been a matter of luck, and there is certainly no guarantee that those lie detectors would show the same performance if they were tested a second time. A better way of examining people's ability to detect deceit and the
strategies good lie detectors use is to test the same people on several occasions, and to examine which lie detectors give a consistent performance. Particular attention can then be paid to the cues mentioned by those who are consistently good.

Poor interview techniques. Finally, several poor interview techniques hamper lie detection. For example, police detectives are sometimes advised to confront suspects with pieces of evidence they have already gathered early on in the interview (Inbau et al., 2001). The reason behind this is to show suspects that it is fruitless to remain silent and that it might be better for them to talk. This interview style will hamper lie detection. One of the difficulties for liars is that they do not know what the observer knows. They therefore do not know what they could tell without running the risk of getting caught out. By disclosing to suspects the facts they know, police officers reduce the uncertainty for lying suspects and make lying easier for them.

Another unfortunate strategy is accusing someone of lying. This gives liars the ideal opportunity to 'escape' from the interview situation. Guilty suspects might tell police detectives that they no longer want to continue co-operating with the investigation, and give a 'no comment' interview, as further interviewing does not make sense given the fact that the police detectives do not believe them (the suspect) anyway. Or it may result in a 'counter-attack'. When a wife tells her adulterous husband that she believes that he has a mistress, he may well, in order to cover himself, react angrily and challenge her trust in him. Also, accusing someone might elicit the same responses in liars and truth tellers which then makes it impossible to distinguish between them (Bond & Fahey, 1987; Ekman, 1985/2001). That is,

although a liar might become afraid of not being believed when accused of lying, the same fear might also apply to a truth teller, who may also become afraid of not being believed. Because of that fear, they may show the same nervous behaviours as liars (Bond & Fahey, 1987). This puts the lie detector in a difficult position: Should signs of fear be interpreted as a sign of guilt or as a sign of innocence? The behaviour doesn't provide the answer. Ekman (1985/2001) labelled this phenomenon the Othello error, after Shakespeare's play. Othello falsely accuses his wife, Desdemona, of infidelity. He tells her to confess since he is going to kill her for her treachery.
Desdemona asks Cassio (her alleged lover) to be called so that he can testify her innocence. Othello tells her that he has already murdered Cassio. Realising that she cannot prove her innocence, Desdemona reacts with an emotional outburst. Othello, however, misinterprets this outburst as a sign of her infidelity.

Epilogue

In this article I provided an overview of reasons why people make mistakes when attempting to detect lies. A combination of lack of motivation, liars' skill, incorrect beliefs about deceptive cues, lack of insight into individual and situational differences, constraints in conversations and unfortunate interview techniques are all contributory factors. Obviously, lie detectors could use this information and try to improve their lie detection skills. Elsewhere I presented guidelines how to do this (Vrij, 2000a, in press, b). I believe that becoming better lie detectors is useful for those who need to catch liars on a professional basis, such as police officers, customs officers, secret agents, judges, immigration officers, employees of insurance companies, selection board personnel, etc.. However, I don't think it is always useful in daily life circumstances. I am doubtful about how we would all cope if we come to know what people really think of our appearance, actions, achievements, etc.. It cannot be ruled out that such knowledge would only serve to seriously damage many people's self image and self esteem. Being ignorant of when we are lied to in daily life situations might therefore often be the preferable option.

References


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