

Who would believe in a Liar?

Although quite anonymous in Norway, witness psychology is both a practical and theoretical segment that has grown out of cognitive psychology. A significant branch within witness psychology is related to judgements of a person's credibility, such as whether emotional expressions are reliable signs of truth, or whether there is any typical behaviour associated with truth so that one might make predictions from a person's behaviour about his or her statements and testimony. Knowledge as such is important for the professional lie detector as well as in the private sphere when one wants to distinguish deception among otherwise credible individuals. Because we do lie. Research using students' diaries and people's notes has shown that students lie at least twice a day and that the average man adds a creative touch to the truth at least once a day (DePaulo et al., 1996).



Dr. Annika Melinder,
Department of Psychology,
University of Oslo.
CAS Fellow 2003/04.

Even if there are not any gender differences in the number of lies we tell, the content may differ so that women tend to lie more about their physical appearance, whereas men tend to exaggerate their earning potential (Memon, Vrij & Bull, 2003). To mention another disappointment: when people have described the most

serious lie they have ever told to somebody else, overwhelmingly many report that the targets of these lies were romantic partners (Anderson, Ansfield, & DePaulo, 1999). Such lies were told to cover serious issues, such as infidelities. Would we really like to know about other's betrayals? If so, is there any method that can reliably separate the truth from a lie? Or that can point to who is credible and who is not?

Unfortunately, researchers have found no reliable behavioural sign of truth, nor have they found any significant verbal cues to deception. However, there are still influential experts who claim to be able to help categorize liars from truth-tellers by using simplistic systems. In the following we survey briefly what empirical evidence there is in order to state our abilities to detect deception.

The naïf view

Psychologists have discussed the question of emotional reactions and their relation to cognitive processes from the very beginning of this field, which this statement captures: "... the bodily changes follow directly the perception of the exciting fact, and that our feeling of the same changes as they occur is the emotion" (William James, 1884). Such ideas, which have indeed been empirically tested and gained some support, are the ground for the naïf view of how and why states of the mind, including deception, can be transformed into observable behaviour.

The underlying assumption is that lies evoke emotions (anxiety and fear), which are out of the range of behavioural control even if the person

can control the verbal communication. The second assumption is that deceptive behaviour demands more cognitive resources than truthful behaviour, which will consequently lead to less monitoring of one's own behaviour (Vrij, 2000). Following both assumptions, one will expect more nervous and anxious behaviour when a person is telling lies, than when she or he is telling the truth. Primarily one will predict more bodily reactions such as sweat and higher blood pressure, but also more changes in the pitch of voice and speech flow when people are telling lies. Note, however, that such reactions may be caused by other sources. For example, when people are accused of something of which they are not guilty, the accusation *per se* can produce an increased level of arousal, which will evoke the same bodily responses as described.

Deception theories that are based on the notion that “emotion (evoked by the state of stress that a liar is supposed to experience) leads to specific deceptive responses,” depend on certain facts from empirically supported theories. However, these facts tend to be misused in certain deceptive frameworks (e.g., Inbau, Reid, & Buckley, 1986; Inbau, Reid, Buckley, & Jayne, 2001) so that specific behaviour is interpreted as an indication of deception (gaze aversion, fidgeting, placing hand over mouth, and postural shifts), whereas other behaviour is interpreted as a sign of truth (looking into the other's eyes). Of course, trusting wrong cues could lead lie detectors into false beliefs. When this happens in a forensic setting, an individual's rights may be endangered, as researchers have pointed out (Vrij, Semin, & Bull, 1996; Vrij, Edward, & Bull, 2001).

Professionals' expertise when detecting lies

Ekman and O'Sullivan (1991) explored the assumption that untruthful intentions would be reflected in behaviour and detected by trained professionals. Thus, they let experienced professionals, such as secret service officers, judges, psychiatrists and polygraph operators see a video tape of different women who talked on-line about the feelings they felt when viewing either positive or aversive scenes. The women had been instructed to state how they felt (truth) in half of the cases, whereas they reported the opposite feeling (lie) with respect to what they felt in the other half of the cases. The professionals' task was to tell who was communicating their honest feelings, and who was not. Table 1 shows the disappointing results,

Table 1. Professionals' Ability to Detect Deception

	Truth	Lie	Total
DePaulo & Pfeifer (1986) (law enfor)	64	62	53
Ekman & O'Sullivan (1991) (secret service)			64
Ekman & O'Sullivan (1991) (polygraphers)			56
Ekman & O'Sullivan (1991) (police officers)			56
Ekman, O'Sullivan, & Frank (1999) (CIA)		80	73
Ekman et al. (1999) (sheriffs)	56	78	67
Ekman et al. (1999) (law enforcement)	54	48	51
Koehnken (1987) (police officers)	58	31	45
Meissner & Kassin (2002) (law enfor)			50
Porter et al. (2000) (parole officers)	20	60	40
Vrij (1993) (police detectives)	51	46	49
Vrij & Graham (1997) (police officers)			54
Vrij & Mann (2001a) (police officers)	70	57	64
Vrij & Mann (2001b) (police officers)	51		
Total	55	55	55

Note. Percentage of Professionals' Ratings on Behaviour regarding Truth and Lies. The Table has been adapted from Vrij, 2002.

namely that even highly trained professionals perform badly. All groups – except the secret service officers – scored at chance level, a result that has been replicated in several studies and reviewed by Vrij (2002).

It is reasonable to argue that high stake situations evoke other aspects in the suspect’s behaviour than laboratory research can model. Practitioners have therefore claimed that researchers should use realistic settings when studying professionals’ capabilities. In line with this, Vrij and Mann (2001a) exposed experienced police officers to video films from press conferences of a person who was appealing to the public for help in finding a missing relative, or the murderer of a dead relative. In some of these cases, the person who had appealed to the public was subsequently found guilty of the crime committed. Thus some of the persons appealing were lying during the press conference and the task of the police officers was to judge whether or not the person appealing for help was guilty or innocent. And, voilà, the result does slightly improve although it is the detection of truth that contributes to the enhanced result, and not the detection of lies (Table 1). A point of interest is that criminals have shown themselves able to outperform students in terms of detecting lies, but not in detecting truth (Hartwig, Granhag, Strömvall & Andersson, 2004).

Reasons for incorrect beliefs

So far, we can note that 1) there is no such thing as directly observable behaviour that corresponds to deception, and 2) professional experience does not help in making correct evaluations. It would be interesting in this context to know what kind of guidance people, including professional lie detectors, use when cuing for truthful versus deceptive behaviour. It could be that people are taught the wrong cues. When people, again including professional lie detectors, are asked to describe what verbal and non-verbal behaviour they regard as reliable signs of credibility, the reports show an incredible similarity across respondents. Hence, if the person avoids eye contact, smiles (more insecurely), closes his/her eyes more frequently, and shows more bodily anxiousness such as nods and shaking the head, well then people tend to believe that the person is lying. When specifically asked about it, even experienced police officers reported avoidance of eye contact as the most frequent sign they used in the evaluation of a suspect’s performance (Vrij & Mann, 2001). Compared to controlled studies that have been conducted of actual behaviour when lying and a meta-analysis of 116 empirical studies of 158 signs of lying (DePaulo et al., 2003), few of these subjective signs correspond to the objective indicators, as shown in Table 2.

In sum, professional lie detectors’ and ordinary peoples’ evaluations of credible behaviour seems to be based on stereotyped views which have no correspondence with objective facts. These stereo-

Table 2. Cues Present during Deception

pitch of voice	>
illustrators	<
hand/finger movements	<
logical structure	<
unstructured production	<
quantity of details	<
contextual embedding	<
description of interaction	<
reproduction of conversation	<
unusual details	<
visual details	<
sound details	<
space details	<
time details	<
cognitive operations	>

Note. More (>) or less (<) while lying

typed views largely influence peoples' own behaviour when they try to produce both truth and lies, and they guide us when we try to detect deception. If anything, a skilled liar knows what behaviour people in general regard as credible. Bill Clinton, when denying any sexual relationship with Miss Monica Lewinsky, looked firmly into the camera and eloquently assured viewers of his innocence.

Final remarks

Even if we know that people do not judge truthful versus lying behaviour correctly, research is inconclusive with regard to whether people actually perform in the same way when they are telling the truth as when they are telling a lie. Analyses of people's facial micro-expressions have shown that well trained experts can detect even minimal signs of emotional involvement. When trained to understand and observe a range of emotional expressions that are associated with correspondent muscle activation, Ekman, O'Sullivan and Frank (1999) showed that CIA agents and sheriffs did indeed score significantly above chance level (Table 1). Thus, evolutionary psychology postulates that strong emotions activate muscle actions in the face. When we become frightened for example, we tend to raise and pull together the eyebrows and to raise the upper eyelids and tense the lower eyelids. Narrowing of the lips and lowering of the eyebrows are equally descriptions of anger, and when the corners of our lips are pulled up, with creases in the skin below the eyes and crows-feet wrinkles beyond the corners of the eyes, then we are expressing (Ekman, 1992). In practice it is virtually impossible to observe micro-expressions, and even if we could, such expressions only mirror the emotional arousal, not the content of the person's thoughts.

If non-behaviour is unreliable as a detection tool, what about verbal behaviour then? Over the years researchers have developed check lists for analyzing statements and judging their reliability. An example of this type is the Content Based Criteria Analysis (CBCA), which includes 19 different scoring categories. The presence of the categories in a statement increases the likelihood that the statement is true. However, experimental studies are inconclusive regarding to what degree the instrument is a valid detection method. As can be seen from Table 2, cognitive operations (references to thoughts instead of perceptual features when recounting an event) and pitch of voice are the only two aspects that really increase when people are lying. People, including children, can produce detailed and elaborate stories about fictitious events that never took place, and, seen in this light, fabricate lies.

Even if we do not like to believe in a liar, there is not much in the way of scientific support for our selection of reliable signs of credible behaviour. Thus, at least once a day you will be betrayed.

References

- Anderson, D. E., Ansfield, M. E., & DePaulo, B. M. (1999). Love's best habit: Deception in the context of relationship. In P. Philippot, R. S. Feldman & E. J. Coats (Eds.). *The social context of nonverbal behavior* (pp. 372–409).
- DePaulo, B. M., Lindsay, J. J., Malone, B. E., Muhlenbruck, L., Charlton, K., & Cooper, H. (2003). Cues to deception. *Psychological Bulletin*, *129* (1), 74–118.
- Ekman, P. (1992). *Telling lies: Clues to deceit in the marketplace, politics and marriage*. New York: W.W Norton.

Who would believe in a Liar?

- Ekman, P. & O'Sullivan, M. (1991). How can we catch a liar? *American psychologist*, 46, 913–920.
- Memon, A., Vrij, A., & Bull, R. (2003). *Psychology and law: Truthfulness, accuracy and credibility*. Chichester: Wiley & Sons Ltd.
- Hartwig, M., Granhag, P.-A., Strömwall, L. A., & Andersson, L. O. (2004). Suspicious minds: Criminal's ability to detect deception. *Psychology, crime, and law*, 10, 83–95.
- Inbau, F. E., Reid, J. E., & Buckley, J. P. (1986). *Criminal interrogation and confessions*, 3rd edn. Baltimore, MD: Williams & Wilkins.
- Inbau, F. E., Reid, J. E., Buckley, J. P., & Jayne, B. C. (2001). *Criminal interrogation and confessions*, 4th edn. Gaithersburg, MD: Aspen Publishers.
- James, W. (1884). What is an emotion? *Mind*, 9, 188–205.
- Vrij, A. (2000). *Detecting lies and deceit: The psychology of lying and its implications for professional practice*. Chichester: Wiley.
- Vrij, A. & Mann, S. (2001). Lying when the stakes are high: Deceptive behavior of a murderer during his police interview. *Applied cognitive psychology*, 15, 187–203.
- Vrij, A. & Mann, S. (2001). Who killed my relative? Police officers' ability to detect real-life high stakes lies. *Psychology, crime and law*, 7, 119–132.
- Vrij, A. Semin, G. R. & Bull, R. (1996). Lie experts' beliefs about nonverbal indicators of deception. *Journal of nonverbal behaviour*, 20, 65–80.
- Vrij, A., Edward, K., & Bull, R. (2001). People's insight into their own behaviour and speech content while lying. *British Journal of Psychology*, 92, 373–389.