

## Good Liars

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**Abstract:** A neglected area in deception research is what constitutes a good liar. On the basis of deception theory, people's views about how liars respond, impression formation theory and persuasion theory, we describe 18 attributes that in our view are present in a good liar. Insight into these characteristics will help law enforcement personnel in two ways: It provides insight into who would be suitable for undercover operations, and it may help lie detectors, because one reason why people make errors in lie detection is that they do not take the full complexity of deception into account and seem to have limited knowledge about what is actually going on in a liar's mind.

**Keywords:** deception, detection of deception, lie detection, lie, liar, lying

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### Introduction

Deception research has focused on a wide range of issues, including why people lie, the topics they lie about, how often they lie, whether liars differentiate from truth tellers in terms of speech content, nonverbal behavior and physiological cues, and how good people are at detecting liars (Vrij, 2008). Widely ignored is the straightforward and relevant question: What constitutes a good liar? Insight into this question benefits law-enforcement personnel in two ways. First, it provides insight into who would be suitable for undercover operations. Second, it may help lie detectors. One reason why people make errors in lie detection is that they do not take the full complexity of deception into account and seem to have limited knowledge about what is actually going on in a liar's mind (Vrij, 2004a, b; 2008).

This article addresses the issue of what characterizes a good liar. Due to the paucity of research in this area, we will not present many empirical findings. Instead, we will discuss criteria that we think will suit a good liar, and we base these criteria on four sources of information. The first of these is theories of deception, giving insight into what may hinder liars and what they need to overcome in order to be successful. The second is people's views on how liars respond, explaining what reactions liars need to avoid. Third, impression formation theory provides insight into what type of people naturally come across as likeable, trustworthy, and honest. Finally, fourth is persuasion theory, which describes what liars could do in order to convince others. Taking these four areas into account, we will then discuss 18 characteristics that we think constitute a good liar. The limited amount of research addressing what strategies liars actually use will be discussed in the final section of this article.

### **Deception Theory**

There are several theoretical perspectives, each suggesting reasons why liars may show signs of deceit, and they all have one important feature in common: The mere fact that people lie will not affect their behavior, speech content, or physiological responses. However, sometimes liars may show different responses to truth tellers.

**Zuckerman, DePaulo, & Rosenthal's (1981) multiple factor model.** According to Zuckerman et al. (1981), the differences in responses are the result of liars experiencing an increase in emotions or cognitive load, or attempting to control their behavior. Each of these aspects may influence a liar's response.

Telling a lie is most commonly associated with two different emotions: guilt and fear (Ekman, 1985/2001). Liars might feel guilty because they are lying or might be afraid of not being believed. However, liars do not always experience these emotions. In fact, research has indicated that they do not feel any of these emotions in the majority of lies they tell in daily life (DePaulo, Kashy, Kirkendol, Wyer, & Epstein, 1996). Nonetheless, emotions are likely to be felt in situations where the stakes (i.e., positive consequences of getting away with the lie and negative consequences of getting caught) are high. In such circumstances, the strength of the emotions depends on the personality of the liar and on the circumstances under which the lie takes place (Ekman, 1985/2001; Ekman & Frank, 1993). Some people will experience less guilt than others while lying. For example, for manipulators, people high in Machiavellianism or social adroitness, lying is a normal and acceptable way of achieving their goals. Manipulators frequently tell lies, tend to persist in lying when challenged to tell the truth, don't feel uncomfortable when lying, and don't feel guilty when lying. In addition, they don't find lying cognitively too complicated, view others cynically, show little concern for conventional morality, and openly admit that they will lie, cheat, and manipulate others to get what they want (Kashy & DePaulo, 1996; Gozna, Vrij, & Bull, 2001).

Interpersonally, manipulators are scheming but not stupid. They do not exploit others when their victims might retaliate, and do not cheat when they are likely to get caught. In conversations, they tend to dominate, but they also seem relaxed, talented and confi-

dent. They are usually liked more than people low in manipulative skills and are preferred as partners (Kashy & DePaulo, 1996).

**DePaulo's Self-Presentational Perspective.** Zuckerman et al.'s (1981) perspective predicts that the more liars experience one or more of the three factors (emotions, content complexity, behavioral control), the more likely it is that cues to deception will occur. A key element in DePaulo's self-presentational perspective (DePaulo, 1992; DePaulo et al., 2003) is that truth tellers and liars have much in common, as truth tellers might also experience these factors. Thus, being accused of wrongdoing might make liars feel uncomfortable, but probably also truth tellers; liars might be afraid of not being believed in high stakes situations, but so might truth tellers, since not being believed might harm them also; producing lengthy statements might be more cognitively demanding for liars, but probably also for truth tellers, and so on. According to DePaulo et al. (2003) differences between liars and truth tellers occur for two reasons. First, deceptive self-presentations might be less convincingly embraced as truthful self-presentations, for example, because liars have moral scruples, lack the emotional investment in their false claims, or lack the knowledge and experience to convincingly back up their deceptive statements. Second, liars typically experience a greater sense of awareness and deliberateness in their performances than truth tellers do, because they typically take their credibility less for granted than truth tellers. They therefore feel perhaps a stronger need to act, which might not be very successful if someone is poor at acting.

**Buller and Burgoon's Interpersonal Deception Theory (IDT).** The third perspective, Interpersonal Deception Theory (Buller & Burgoon, 1996; Burgoon, Buller, & Guerrero, 1995) postulates that lying in face-to-face encounters is not a unidirectional activity; rather, both liar and receiver actively participate in constructing the deceptive conversation (Burgoon, Buller, Floyd, & Grandpre, 1996). When liars are exposed to negative feedback from the receiver, expressed verbally or nonverbally (the latter for example through a lack of conversational involvement), the liar might realize that his or her performance is lacking credulity and might therefore attempt to make behavioral adjustments over time to diminish suspicions. Being good at nonverbal decoding, that is, spotting and correctly interpreting subtle nonverbal cues in a conversation partner, is a particularly beneficial skill in this respect.

### **People's Views about How Liars Respond**

A substantial number of studies have been carried out examining how observers think that liars respond. Strömwall, Granhag, and Hartwig (2004), Vrij, Akehurst and Knight (2006) and Vrij (2008) provide reviews of these studies. Those studies have been carried out in countries all over the world such as Germany, the Netherlands, Sweden, the United Kingdom, and the United States, albeit mostly with Caucasian participants. Moreover, the participants were sometimes laypersons, but also police officers, prison guards, customs officers, prosecutors, and judges. A striking and consistent finding is that, with the exception of prisoners, people across different occupational groups and different countries do not differ in their beliefs about deception. People typically believe that liars will react nervously with "looking away" and "making grooming gestures" being the most popular answers (see

also the Global Deception Team, 2006). People also believe that liars experience cognitive load when telling convincing lies. Finally, people find “odd responses,” that is responses that violate normative expectations, suspicious (Bond, Omar, Pitre, Lashley, Skaggs, & Kirk, 1992). For example, people have expectations about how often someone looks a conversation partner into the eyes during face-to-face interactions. Deviations from this pattern, either looking away from another or staring into the eyes of another, are suspicious. However, what the norms of gaze behavior are depends on factors such as the social power of the people who interact (DePaulo & Friedman, 1998), and their cultural background (Vrij, 2008).

### **Impression Formation Theory**

Many impressions and judgments about others are made rapidly, unwittingly and intuitively, and just a mere glance of another person can trigger such impressions and judgments (Ambady, Bernieri, & Richeson, 2000). Once made, they form the anchor from which subsequent impressions and judgments are made (Ambady et al., 2000). For example, O'Sullivan (2003) found that when an observer believes a person to be generally a trustworthy person, he or she will have the tendency to judge that person as truthful in any given situation. Similarly, when the observer believes a person is untrustworthy, he or she will be inclined to judge that person as dishonest in any given situation. In other words, it benefits one to make a positive and/or trustworthy first impression. In that respect, physical appearance could be important, as good-looking people are typically thought of as more honest (Aune, Levine, Ching, & Yoshimoto, 1993; Bull, 2004; Bull & Rumsey, 1988).

### **Persuasion Theory**

DePaulo and Friedman (1998, p.12) pointed out “an effective door-to-door salesperson succeeds not because of knowledge of written persuasion techniques, but because of something in the dynamics of the face to face [sic] interaction.” Indeed, persuasion theory (see Brehm, Kassin, & Fein, 1999, for an overview) has suggested that effective communicators are perceived as likeable. A behavior style that includes directed gaze to the conversation partner, smiling, head nodding, leaning forward, direct body orientation, posture mirroring and uncrossed arms are typically perceived positively (Tickle-Degnen & Rosenthal, 1990); so are moderately fast speaking rates, lack of ums and ers, vocal variety (Buller & Aune, 1988), behavior matching (that is, when two people behave similarly) (Chartrand & Bargh, 1999) and articulate gesturing (Ekman, 1985/2001). Being physically attractive and being perceived as similar to the perceiver also contributes to likeability (Brehm et al., 1999).

### **Characteristics of Good Liars**

Based on the literature discussed above, we believe that the following characteristics constitute a good liar.

**Personality.** *Manipulators, good actors and expressive people* probably make better liars than their counterparts for different reasons. Manipulators lie often, have no moral scruples when they lie (which reduces feelings of guilt), feel confident when they lie (which reduces fear of not being believed), and don't find it cognitively difficult to lie (which reduces signs of cognitive complexity). Actors are probably good liars because they feel confident when they lie and don't find lying difficult. Expressive people are often liked. They make an honest impression because their demeanor disarms suspicion. Good-looking people also tend to be liked and perceived as honest; therefore, being *physically attractive* may also benefit liars.

**Behavior.** Since some behavioral patterns make a suspicious impression on others, whereas other behavioral patterns are associated with honesty and likeability, it will benefit liars when they show these positive behaviors. Those who show such behaviors naturally, *natural performers* (Ekman, 1997), are therefore in a beneficial position. Those who don't show such behaviors naturally can't react spontaneously but need to act when they would like to produce such behaviors. They thereby run the risk of their behavior lacking spontaneity and looking artificial (DePaulo & Kirkendol, 1989; Vrij, Semin, & Bull, 1996). An issue that complicates showing positive behavior is that what is seen as positive may well be culturally defined. Whether this is the case is unclear due to lack of cross-cultural research in this area, but it is known that people from different cultures sometimes show different behaviors (Vrij, 2008).

**Emotions.** Good liars probably don't experience strong feelings of guilt and fear. As already mentioned, experiencing such feelings is related to personality, with manipulators and actors experiencing such emotions to a lesser extent than their counterparts. It is also related to *being experienced in lying*, and *feeling confident when lying*. However, it is likely that in some circumstances, for example high-stakes situations, people will experience emotions such as fear of not being believed when they lie. On such occasions a liar will not be fundamentally different from a truth teller, as truth tellers probably will experience the same emotions in such circumstances. However, it sounds reasonable that good liars are those who are able to *mask or camouflage such emotions*. Expressive people are relatively good at feigning convincing expressions of feelings that they are not actually experiencing (Friedman et al., 1988). However, these are also the people who tend to express their true feelings spontaneously. When lying, they therefore may have to mask their relatively stark inclination to show the emotional expressions they truly feel. Therefore, their skill in feigning emotions might well be counteracted in part by this glaring inclination to show real feelings. Indeed, there is evidence that expressive people have problems with suppressing their emotional expressions in the heat of passion (Friedman & Miller-Herringer, 1991).

**Cognitive load.** Lying is generally more cognitively demanding than telling the truth (Vrij, Fisher, Mann, & Leal, 2006), but very good liars don't experience much cognitive load when they lie. As mentioned above, there are individual differences that are in part related to personality: Manipulators and actors find lying less demanding than their counterparts. People who are good actors probably experience less cognitive load, as do people who are *eloquent*. Several other factors are related to cognitive load, such as adequate prepa-

ration. Good liars are probably *well prepared* and have worked out in advance what they are going to say and do. Good lie detectors will check the person's statement and will search for evidence that confirms or contradicts these statements. Liars should therefore be careful about what they say. Ideally, *they should only say things that are impossible for others to verify*. Concealing information is therefore better than telling an outright lie: Telling somebody that you “honestly can't remember” what you have done a couple of days ago is preferable to making up a story, as the latter option gives the observer the opportunity to check the story. The more difficult it is to verify that statement, the better the statement is from a liar's point of view. Concealments, however, are not always possible; sometimes a statement needs to be provided. In which case, it may help *to say as little as possible*. The less information is given, the less opportunity it provides for the lie detector to check.

**Decoding skills.** As was emphasized in our discussion of Interpersonal Deception Theory (IDT; see above), liars could perhaps increase their chances of not getting caught by adapting their response once their reply raises suspicions in the receiver. Again according to IDT, receivers' suspicions might become clear through nonverbal cues. In that respect, those who have good *decoding skills* and therefore quickly notice such suspicions may be more successful liars.

### Strategies that Liars Use

Good liars use effective strategies to conduct their behavior. But which strategies do they use, and how do these differ from the strategies used by truth-tellers? To date there is very little research on truth-tellers' and liars' strategies, but since a plea from DePaulo et al. (2003) that type of research is on the increase (see for example; Granhag & Strömwall, 2002; Granhag & Hartwig, 2008; Hartwig, Granhag, & Strömwall, 2007; Strömwall, Granhag, & Landström, 2007; Strömwall, Hartwig, & Granhag, 2006; Vrij, Leal, Granhag, Mann, Fisher, Hillman & Sperry, in press). In this section we will sum up what science can tell us, and offer a few speculations on the issue. At the most basic level, a distinction can be made between strategies pertaining to (a) the statement (e.g., the theme and the level of details) and (b) the acting in terms of nonverbal behavior (e.g., eye contact, body language). Below we will discuss both types of strategies. Specifically, first we will examine the extent to which truth-tellers and liars differ in terms of employing strategies. Then we will close in on the different types of strategies used, and discuss verbal and nonverbal strategies separately. The so-called self-presentational perspective, advocated by, for example, DePaulo et al. (2003), suggests that both liars and truth-tellers edit their behavior in order to appear truthful. Hence, in order to learn about liars' strategies, and separate effective from less effective strategies, we need to study also truth-tellers' strategies.

In a study by Strömwall, Hartwig and Granhag (2006), thirty students were interrogated by experienced police officers about a mock crime (half lied and half told the truth). After the interrogations, the suspects were asked about their strategies. Interestingly, only 10% of the liars reported that they had lacked a strategy, whereas the corresponding figure for truth-tellers was 30%. A similar trend was found in a recent study by

Hartwig, Granhag and Strömwall (2007), who also found that liars and truth-tellers did not differ in the extent to which they had planned the verbal content of their statement, but liars reported having planned their nonverbal behavior to a larger extent than truth-tellers. Why is it that truth-tellers are less prone to plan their behavior and use strategies during an interrogation? A tentative answer is suggested by Kassin and Norwick (2004), who, in a recent study, showed that many truth-telling suspects seem to have strong faith in the power of their own innocence; they have "done nothing wrong" and expect that the truth will come out. In addition, truth-tellers' reasoning may also suffer from the so-called *illusion of transparency*, which may cause them to believe that their inner feelings and states will manifest themselves on the outside (Savitsky & Gilovich, 2003), and that their innocence thus shows. Such reasoning may turn out to be very naïve, and may cause a truth-teller much suffering.

To sum up, it may be tempting to conclude that the most successful liars are those who manage to imitate the behavior of truth-tellers. But considering that research shows that people hold misconceptions about not only liars', but also truth-tellers' behavior (Strömwall, Granhag, & Hartwig, 2004), a liar should think twice about trying to imitate truth-tellers. Instead, good liars make sure they behave in accordance with people's beliefs about how truth-tellers behave, and make sure they avoid behaving in ways that fit with people's beliefs about how liars behave.

## Conclusion

On the basis of theory, we came up with 18 characteristics that are likely to be present in a good liar. Since research about good liars is almost lacking, we hope that this article will stimulate scholars and practitioners to conduct research in this area. As mentioned above, we believe that this article will benefit lie detectors as it gives more insight into liars, but will it make people better liars? We don't think it will. Undoubtedly, this article provides some tips that liars could use in order to make their performance more convincing, but most characteristics we mentioned are inherent, and related to personality and being a natural performer. In that respect, this article is more useful to identify people who might be naturally good at lying.

## References

- Ambady, N., Bernieri, F. J., & Richeson, J. A. (2000). Toward a histology of social behavior: Judgmental accuracy from thin slices of the behavioural stream. *Advances in Experimental Social Psychology*, 21, 201-271.
- Aune, R. K., Levine, T., Ching, P., & Yoshimoto, J. (1993). The influence of perceived source reward value and attributions of deception. *Communication Research Reports*, 10, 15-27.
- Baddeley, A. (1990). *Human memory: Theory and practice*. Hove, UK: Erlbaum.
- Bennett, W. L., & Feldman, M. S. (1981). *Reconstructing reality in the courtroom*. London: Tavistock.

- Bond, C. F., Omar, A., Pitre, U., Lashley, B. R., Skaggs, L. M., & Kirk, C. T. (1992). Fishy-looking liars: Deception judgment from expectancy violation. *Journal of Personality and Social Psychology*, *63*, 969-977.
- Brehm, S. S., Kassin, S. M., & Fein, S. (1999). *Social Psychology, fourth edition*. Boston, MA: Houghton Mifflin.
- Bull, R. (2004). Training to detect deception from behavioural cues: Attempts and problems. In P. A. Granhag & L. A. Strömwall (Eds.), *Deception detection in forensic contexts* (pp. 251-268) Cambridge, England: Cambridge University Press.
- Bull, R., & Rumsey, N. (1988). *The social psychology of facial appearance*. New York, NJ: Springer-Verlag.
- Buller, D. B., & Aune, R. K. (1988). The effects of vocalics and nonverbal sensitivity on compliance: A speech accommodation theory explanation. *Human Communication Research*, *14*, 301-332.
- Buller, D. B., & Burgoon, J. K. (1996). Interpersonal deception theory. *Communication Theory*, *6*, 203-242.
- Burgoon, J. K., Buller, D. B., Floyd, K., & Grandpre, J. (1996). Deceptive realities: Sender, receiver, and observer perspectives in deceptive conversations. *Communication Research*, *23*, 724-748.
- Burgoon, J. K., Buller, D. B., & Guerrero, L. K. (1995). Interpersonal deception IX: Effects of social skill and nonverbal communication on deception success and detection accuracy. *Journal of Language and Social Psychology*, *14*, 289-311.
- Chartrand, T. L., & Bargh, J. A. (1999). The chameleon effect: The perception - behaviour link and social interaction. *Journal of Personality and Social Psychology*, *76*, 893-910.
- Crowley, A. E., Hoyer, W. D. (1994). An integrative framework for understanding two-sided persuasion. *Journal of Consumer Research*, *20*, 561-574.
- DePaulo, B. M. (1992). Nonverbal behaviour and self-presentation. *Psychological Bulletin*, *111*, 203-243.
- DePaulo, B. M., & Friedman, H. S. (1998). Nonverbal communication. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (pp. 3-40). Boston, MA: McGraw-Hill.
- DePaulo, B. M., & Kashy, D. A. (1998). Everyday lies in close and casual relationships. *Journal of Personality and Social Psychology*, *74*, 63-79.



- DePaulo, B. M., Kashy, D. A., Kirkendol, S. E., Wyer, M. M., & Epstein, J. A. (1996). Lying in everyday life. *Journal of Personality and Social Psychology*, *70*, 979-995.
- DePaulo, B. M., & Kirkendol, S. E. (1989). The motivational impairment effect in the communication of deception. In J. C. Yuille (Ed.), *Credibility assessment* (pp. 51-70). Dordrecht, the Netherlands: Kluwer.
- Eagly, A. H., Wood, W., & Chaiken, S. (1978). Causal inferences about communicators and their effect on opinion change. *Journal of Personality and Social Psychology*, *36*, 424-435.
- Ekman, P. (1985/2001). *Telling lies*. New York: W. W. Norton.
- Ekman, P. (1997). Deception, lying, and demeanor. In D. F. Halpern & A. E. Voiskounsky (Eds.), *States of mind: American and post-soviet perspectives on contemporary issues in psychology* (pp. 93-105). New York, NJ: Oxford University Press.
- Ekman, P., Davidson, R. J., & Friesen, W. V. (1990). The Duchenne smile: Emotional expression and brain physiology II. *Journal of Personality and Social Psychology*, *58*, 342-353.
- Ekman, P., & Frank, M. G. (1993). Lies that fail. In M. Lewis & C. Saarni (Eds.), *Lying and deception in everyday life* (pp. 184-201). New York, NJ: Guildford Press.
- Ekman, P., & Friesen, W. V. (1982). Felt, false, and miserable smiles. *Journal of Nonverbal Behaviour*, *6*, 238-253.
- Frank, M. G., & Ekman, P., & Friesen, W. V. (1993). Behavioral markers and recognizability of the smile of enjoyment. *Journal of Personality and Social Psychology*, *64*, 83-93.
- Friedman, H. S., Riggio, R. E., & Casella, D. F. (1988). Nonverbal skill, personal charisma, and initial attraction. *Personality and Social Psychology Bulletin*, *14*, 203-211.
- Friedman, H. S., & Miller-Herringer, T. (1991). Nonverbal display of emotion in public and private: Self-monitoring, personality, and expressive cues. *Journal of Personality and Social Psychology*, *61*, 766-775.
- The Global Deception Team (2006). A world of lies. *Journal of Cross-Cultural Psychology*, *37*, 60-74.

- Gozna, L., Vrij, A., & Bull, R. (2001). The impact of individual differences on perceptions of lying in everyday life and in high stakes situation. *Personality and Individual Differences, 31*, 1203-1216.
- Granhag, P. A., & Strömwall, L. A. (1999). Repeated interrogations: Stretching the deception detection paradigm. *Expert Evidence: The International Journal of Behavioural Sciences in Legal Context, 7*, 163-174.
- Granhag, P. A., & Strömwall, L. A. (2002). Repeated interrogations: Verbal and nonverbal cues to deception. *Applied Cognitive Psychology, 16*, 243-257.
- Granhag, P. A., Strömwall, L. A., & Jonsson, A. C. (2003). Partners in crime: How liars in collusion betray themselves. *Journal of Applied Social Psychology, 4*, 848-867.
- Granhag, P. A., & Hartwig, M. (2008). A new theoretical perspective on deception detection: On the psychology of instrumental mind-reading. *Psychology, Crime & Law, 14*, 189-200.
- Hartwig, M., Granhag, P. A., & Strömwall, L. (2007). Guilty and innocent suspects' strategies during interrogations. *Psychology, Crime, & Law, 13*, 213-227.
- Kashy, D. A., & DePaulo, B. M. (1996). Who lies? *Journal of Personality and Social Psychology, 70*, 1037-1051.
- Kassin, S. M., & Norwick, R. J. (2004). Why people waive their Miranda rights: The power of innocence. *Law and Human Behavior, 28*, 211-221.
- O'Sullivan, M. (2003). The fundamental attribution error in detecting deception: The body-who-cried-wolf effect. *Personality and Social Psychology Bulletin, 29*, 1316-1327.
- Riggio, R. E. (1986). Assessment of basic social skills. *Journal of Personality and Social Psychology, 51*, 649-660.
- Riggio, R. E., Tucker, J., & Throckmorton, B. (1988). Social skills and deception ability. *Personality and Social Psychology Bulletin, 13*, 568-577.
- Riggio, R. E., Tucker, J., & Widaman, K. F. (1987). Verbal and nonverbal cues as mediators of deception ability. *Journal of Nonverbal Behaviour, 11*, 126-145.
- Savitsky, K., & Gilovich, T. (2003). The illusion of transparency and the alleviation of speech anxiety. *Journal of Experimental Social Psychology, 39*, 618-625.
- Strömwall, L. A., Granhag, P. A., & Hartwig, M. (2004). Practitioners' beliefs about deception. In P. A. Granhag & L. A. Strömwall (Eds.), *Deception detection in*

- forensic contexts* (pp. 229-250). Cambridge, England: Cambridge University Press.
- Strömwall, L. A., Granhag, P. A., & Landström, S. (2007). Children's prepared and unprepared lies: Can adults see through their strategies? *Applied Cognitive Psychology, 21*, 457-471.
- Strömwall, L. A., Hartwig, M., & Granhag, P. A. (2006). To act truthfully: Nonverbal behaviour and strategies during a police interrogation. *Psychology, Crime, & Law, 12*, 207-219.
- Tickle-Degnen, L., & Rosenthal, R. (1990). The nature of rapport and its nonverbal correlates. *Psychological Inquiry, 1*, 285-293.
- Vrij, A. (2008). *Detecting lies and deceit: Pitfalls and opportunities*. Chichester: John Wiley and Sons.
- Vrij, A. (2004a). Guidelines to catch a liar. In P. A. Granhag & L. A. Strömwall (Eds.), *Deception detection in forensic contexts* (pp. 287-314). Cambridge, England: Cambridge University Press.
- Vrij, A. (2004b). Invited article: Why professionals fail to catch liars and how they can improve. *Legal and Criminological Psychology, 9*, 159-181.
- Vrij, A., Akehurst, L., & Knight, S. (2006). Police officers', social workers', teachers' and the general public's beliefs about deception in children, adolescents and adults. *Legal and Criminological Psychology, 11*, 297-312.
- Vrij, A., Akehurst, L., Soukara, S., & Bull, R. (2002). Will the truth come out? The effect of deception, age, status, coaching, and social skills on CBCA scores. *Law and Human Behaviour, 26*, 261-283.
- Vrij, A., Akehurst, L., Soukara, S., & Bull, R. (2004). Let me inform you how to tell a convincing story: CBCA and Reality Monitoring scores as a function of age, coaching and deception. *Canadian Journal of Behavioural Science, 36*, 2, 113-126.
- Vrij, A., Edward, K., & Bull, R. (2001). Stereotypical verbal and nonverbal responses while deceiving others. *Personality and Social Psychology Bulletin, 27*, 899-909.
- Vrij, A., Fisher, R., Mann, S., & Leal, S. (2006). Detecting deception by manipulating cognitive load. *Trends in Cognitive Sciences, 10*, 141-142.
- Vrij, A., Leal, S., Granhag, P. A., Mann, S., Fisher, R. P., Hillman, J., & Sperry, K. (in press). Outsmarting the liars: The benefit of asking unanticipated questions. *Law and Human Behavior*.

- Vrij, A., & Mann, S. (2001). Telling and detecting lies in a high-stake situation: The case of a convicted murderer. *Applied Cognitive Psychology, 15*, 187-203.
- Vrij, A., Semin, G. R., & Bull, R. (1996). Insight in behavior displayed during deception. *Human Communication Research, 22*, 544-562.
- Zuckerman, M., DePaulo, B. M., & Rosenthal, R. (1981). Verbal and nonverbal communication of deception. In L. Berkowitz (Ed.), *Advances in experimental social psychology, volume 14* (1-57). New York, NJ: Academic Press.