Part 1

Introduction

1 Research on deception detection: past and present

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Deception – a central characteristic of human life

To perceive, feel, and remember are all examples of central characteristics of life. Provocative as it may seem, it is possible to argue that the act of lying constitutes another such example. It takes little effort to show that lying has played, and still plays, an important role in man's coping and survival in society (Serban, 2001), and many great thinkers have put forward strong arguments that lying is necessary for life (Kerr, 1990). The truth is often perceived as something rare and unattainable, caught only by the hands of gods, whereas the lie is human, all too human. Hence, it is fully understandable that people are fascinated by lies and how to detect them.

Most people not only lie on a regular basis, but are also frequently forced to reflect upon and make decisions about questions of truth and deception. The outcome of these reflections and decisions may or may not be important. To spend time trying to find out whether a compliment of a close friend was really true may seem nonsensical. In contrast, decisions to set aside resources in order to find out whether the information received on the planning of future terrorist activities is valid, or whether a suspected murderer is telling the truth about his alibi, are seldom questioned. It is easy to make a long list of instances where the work of separating truths from lies is of great importance. Hence, it is essential to deepen our understanding about deception and its detection, and we believe that the current volume has the potential to make an important contribution to this endeavour.

Aims of the present volume

The present volume focuses on the different types of deception that take place in forensic contexts, and the different methods suggested to detect such deceit. We will use the word 'forensic' in a broad sense and view a 'forensic context' as any context in which legal questions are raised. In

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short, our use of the word 'forensic context' encapsulates all stages in the judicial process.

It is hard (perhaps impossible) to think of a context in which no lies occur. However, we believe that it is of particular relevance to study deception and its detection from a forensic point of view. First, many of those working within the field of law enforcement have to assess veracity on a daily basis. Second, professionals know that deception is quite frequent in forensic contexts. Third, to make mistakes when assessing veracity in forensic contexts can have very severe consequences. Fourth, there are several methods of assessing veracity, and it is of utmost importance to gain more knowledge on the validity of these methods.

In March 2003, several world-leading experts on deception came together in Gothenburg, Sweden. During a two-day symposium entitled 'Deception detection in forensic contexts', these experts delivered twelve state-of-the-field lectures. Each contributor was asked to give a lecture about a topic that was in the very centre of his or her area of expertise. More specifically, the organisers of the symposium had asked the experts to summarise and evaluate the existing scientific knowledge on their topic. In addition, they were asked to present the most established and important research findings in a style suitable for practitioners. An audience of more than two hundred professionals, mostly law-enforcement personnel, attended the symposium.

All chapters in the present volume are based upon lectures given at the symposium; when writing, each expert was asked to expand on the topic that he or she had addressed at the symposium. In short, we asked those who know most about deception to write for those who need the knowledge the most (i.e., people who work in forensic contexts). Many of the chapters address questions pertaining to the application of research, but the volume also covers more basic research. Taken together, this state-of-the-field volume explores what scientific psychology tells us about deception detection. As will be discussed in more detail below, the intense research efforts of the last ten to fifteen years have resulted in an impressive corpus of new knowledge on deception detection, and this volume will summarise where we are today and suggest where we might go next.

Definition and types of lies

To define deception is a difficult task. Whole books have been devoted to the issue, and many scholars have made more or less successful attempts to conceptualise the phenomenon (e.g., Bok, 1978; Galasinski, 2000). The sixteenth-century French philosopher and essayist Montaigne claimed that deception has 'a hundred thousand faces and an

infinite field'. Accepting Montaigne's view, it is easy to understand why defining deception is such a taxing task.

However, for the present context we think that the definition offered by Vrij (2000) will suffice. Vrij describes deception as 'a successful or unsuccessful deliberate attempt, without forewarning, to create in another a belief which the communicator considers to be untrue' (p. 6). Note that a person who unintentionally misremembers is not lying, and that lying requires intention. Moreover, someone should be called a liar only if he or she lies without prior warning about his or her intention, and that even an unsuccessful attempt to deceive is a lie.

We will focus on serious lies, and not the 'social lies' (white lies) that most people tell on a daily basis in order to cast others ('Ah, new haircut – nice!') or themselves ('I never fantasise about others') in a more positive light. For a fascinating series of studies on the frequency and type of everyday lying, see the work by DePaulo and her colleagues (e.g., DePaulo and Bell, 1996; DePaulo, Kashy, Kirkendol, Wyer, and Epstein, 1996).

It is possible to make distinctions between falsifications, distortions, and concealments. Falsifications are total falsehoods, where everything that is being told is contradictory to the truth or made up (sometimes called 'outright lies'). Distortions depart from the truth but are more or less altered in order to fit the liar's goal, and in this category one also finds exaggerations. Finally, a liar can claim that he doesn't know (even if he does) or that he doesn't remember (even if he does), that is, he can conceal the truth. The present volume will address all these different types of lies.

The scientific study of deception

The topic of deception is studied within many different scientific disciplines, such as philosophy (Nyberg, 1993), psychiatry (Ford, 1996), psychology (Ekman, 1985), human communication (McCornack, 1992) and linguistics (Galasinski, 2000). In the current volume we will approach the topic from a forensic point of view and stay close to the research methods and research questions characterising the field of 'psychology and law'.

The field of psychology and law is developing rapidly (Carson and Bull, 2003), and over the last ten years the topic of deception detection has received increased attention. At major international conferences, such as those organised by the European Association of Psychology and Law (EAPL) and the American Psychology–Law Society (APLS), 'deception detection' is frequently found among the many different themes. The

scientific journals within the field, such as *Law and Human Behavior*, *Legal and Criminological Psychology*, and *Psychology, Crime and Law*, now publish papers on deception on a more or less regular basis.

By tradition, the topic deception detection – as it has been studied within the field of psychology and law – is characterised by three different approaches: the analysis of verbal content, the analysis of non-verbal cues (including micro-expressions), and the psychophysiological detection of deception. In the current volume, all three approaches will be thoroughly examined.

Researchers who study deception from a forensic point of view have mainly concentrated their efforts on the following four lines of research: (1) mapping people's ability to detect deception (i.e., the question of detection accuracy), (2) capturing the beliefs people hold regarding deceptive behaviour, as well as the cues people use in order to assess veracity (subjective cues to deception), (3) tracing systematic behavioural differences between liars and truth-tellers, in terms of both non-verbal behaviour and verbal content (objective cues to deception), and (4) trying to improve people's ability to detect deception (e.g., by testing the effectiveness of different techniques and training programmes). In the present volume, each of these different lines of research will be addressed.

Deception research contains elements from many of psychology's different sub-disciplines. For example, to understand why truthful and false statements might differ systematically in terms of verbal content one must study *memory*; in order to explain why a suspect who is videotaped from one angle is judged to be less credible than when taped from another angle, one must study *social psychology*; and to understand why a liar's internal states might translate into certain non-verbal behaviours, it is useful to study *emotions* and *physiological psychology*. Obviously, the full list is much longer, but the point to be emphasised is that to understand human deception one needs to study different domains within psychology.

A brief historical note

It is worthwhile placing the current volume in a historical context. The topic of deception was acknowledged already at the dawn of legal and forensic psychology. In 1908 Hugo Münsterberg, one of the pioneers of forensic psychology, published the book *On the witness stand*. This book is a collection of chapters on how applied psychology can be used to detect and solve crimes and includes chapters on, for example, witness memory, false confessions, and suggestibility in court. In 1909 Clara

and William Stern published *Erinnerung, Aussage, und Lüge in der ersten Kindheit* (translated into English in 1999, *Recollection, testimony, and lying in early childhood*). This book contains chapters on the development of children's memory and testimonial ability, false testimony, falsification through fantasy, pseudo-lies and lies. Both these early volumes addressed the issue of deception in legal contexts.

Modern research on deception can be traced back to the end of the 1960s, when Paul Ekman and Wallace Friesen published their first paper on deception (Ekman and Friesen, 1969). In the 1970s the research and literature on forensic psychology exploded, and it is beyond the scope of the current chapter to systematise how the area of deception detection has developed over the last thirty-five years. Instead, we would like to highlight two previous international conferences on deception detection and relate the content of the current volume to these landmarks.

In September 1981, one of the first international conferences on witness psychology and credibility assessment took place. The meeting was held in Sweden under the name 'The Stockholm Symposium on Witness Psychology', and its subtitle explains the meeting's overall purpose: *An international meeting for the promotion of scientific analysis of human statements in the reconstruction of suspected crimes*. The man behind the symposium was Professor Arne Trankell, one of the pioneers of modern Swedish witness psychology. Trankell was able to attract a team of outstanding researchers; some of whom were already authorities within the field (among them L. R. C. Haward, Friedrich Arntzen, and Udo Undeutsch), and others who were in an earlier stage of, what turned out to be, brilliant research careers (among them Elizabeth Loftus, Ray Bull, Graham Davies and Gisli Gudjonsson). The papers presented at the meeting were published in a volume edited by Trankell, *Reconstructing the past: The role of psychologist in criminal trials* (1982). A majority of the chapters in the volume dealt with different aspects of the analysis of witness statements (analysis of the verbal content), and one section was reserved for chapters on the polygraph.

In June 1988, a conference was held on the theme 'Credibility assessment: A unified theoretical and research perspective'. The conference was held in Maratea in Italy and was organised by John Yuille, with assistance from David Raskin and Max Steller. Also these organisers were able to present a very impressive list of experts. A selection of the papers presented at the conference was published in a book entitled *Credibility assessment* (1989), edited by Yuille. Many of the experts that came together in Stockholm also contributed to the book proceedings of the Maratea conference. In addition, *Credibility assessment* contains contributions from authorities like Paul Ekman and Bella DePaulo.

Contrasting the Stockholm and Maratea volumes against the current, in terms of content and contributors, some interesting observations can be made. First, in terms of content, two themes are found in all three volumes: (a) the analysis of verbal content and (b) questions pertaining to the reliability of the polygraph. Second, both the Stockholm and Maratea volumes contain chapters on eyewitness testimony, chapters that acknowledge factors that may cause witnesses to unintentionally misremember. In contrast, the current volume does not include chapters on mistaken eyewitnesses. This is consistent with the definition of deception presented above, which stresses that lying requires an intentional act. Obviously, issues concerning the reliability of eye-witness testimony are crucial in legal contexts and have been addressed in several ground-breaking volumes over the years (Cutler and Penrod, 1995; Loftus, 1979). Third, the three major themes characterising the Maratea volume, that is, research on verbal content, behavioural cues, and psychophysiological measures, are all expanded upon in the current volume.

Importantly, lie-catchers working within forensic contexts are faced with a multitude of different problems. Hence, beside the main issues of the analysis of verbal content and the reliability of the polygraph, the current volume covers several additional topics not included in any of the above-mentioned international volumes. For example, the detection of feigned amnesia and false confessions, practitioners' beliefs about deception, guidelines on how to detect deception, features characterising lie-catching experts, as well as international and cross-cultural aspects of deception.

In terms of contributors, about half of the chapters in the current volume are written by researchers who contributed to both (Bull and Davies) or one (DePaulo, Ekman and Honts) of the previous two international volumes. We are grateful that these experienced researchers were also willing to contribute to the present volume. It would be far from fair to characterise the remaining contributors as new to the game; most of them have successfully conducted research on deception for more than twenty years. In all, we were very fortunate that such an outstanding team of experts agreed to contribute to the current volume.

Yuille, in his preface to the volume following the meeting in Italy, noted that most of the psychophysiological work on deception has originated in the United States, whereas most of the research on verbal content has originated in Europe. The current volume reflects this division; the researcher who writes about the polygraph (Honts) is from the United States, and the two researchers who write about the analysis of verbal content (Köhnken and Sporer) are both from Europe. Although geography still matters, research on the reliability of the polygraph is not only to

be found in the United States (see, e.g, Ben-Shakhar and Elaad, 2003), and research on verbal content is not limited to Europe (see e.g. Porter and Yuille, 1996).

Structure, content and contributors

Apart from the introduction and conclusion, we have organised the chapters in three major parts. The first, 'Lie-detection techniques', covers the traditional areas of scientific lie detection: non-verbal behaviour, verbal content, and physiological indicators of deception. In Chapter 2, *Bella DePaulo* and *Wendy Morris* provide a very up-to-date account of non-verbal (and verbal) cues to deception. In this chapter, the result of more than thirty years of research on reliable cues to deception is found. In addition, this chapter contains some interesting findings about implicit lie detection, that is the human capacity to spot lies and liars without explicitly detecting 'deception'. In Chapter 3, *Günter Köhnken* presents the latest research on Statement Validity Analysis (SVA). He describes the full technique – not just the Criteria-Based Content Analysis (CBCA) part – and discusses relevant issues of training, interrater reliability, and limitations of the SVA. Köhnken has included research previously available in German only. *Siegfried Sporer* offers in Chapter 4 a very thorough quantitative review of the studies that have used reality monitoring (RM) as a lie-detecting technique. He reviews studies on both adults and children, and compares the RM approach with SVA. In Chapter 5, the final chapter of this part, *Charles Honts* presents a state-of-the-art account of psychophysiological detection of deception. He describes how the technique is used and what research has shown about its reliability. The issues of attitudes towards the polygraph and countermeasures employed by those examined are discussed, as well as the use of the polygraph in non-forensic settings.

The second major part, 'Special issues facing a lie-catcher', consists of four chapters. Each focuses on issues or problems that arise quite often in forensic settings but have not traditionally been part of the deception detection research programme. In Chapter 6, *Charles Bond* and *Sandhya Rao* review cross-cultural aspects of deception. Most research has been conducted in Western cultures, and Bond and Rao examine whether beliefs about deception, and non-verbal indicators of deception, are worldwide phenomena or culture-specific. One question this thought-provoking chapter examines is: can we correctly detect deception in someone from another culture? Most deception research has examined adults' lies, and how these can be detected. However, children's deception must also be studied. In Chapter 7, *Graham Davies* provides an eloquent

narrative about the reasons why children may lie, and the consequences thereof. In addition, suggestive questioning techniques, and experimental studies of adults' ability to detect children's lies are reviewed. The chapter is centred on the English and Welsh example, where a memorandum of good practice on interviewing children was introduced in the early 1990s. In Chapter 8, *Saul Kassin* provides insights into a phenomenon previously ignored in the deception field, but of high practical relevance for police, prosecutors and judges. He discusses how false confessions can arise, and the difficulty of separating them from truthful confessions. *Sven Christianson* and *Harald Merckelbach* examine another, sometimes neglected, issue that is nevertheless of practical significance in Chapter 9. Quite frequently, suspects claim to have amnesia for the crucial period, and the question then arises: Is this amnesia genuine or simulated? Included are both research on how common feigned amnesia is and techniques that can be used to separate genuine amnesia from simulated. This chapter will be of interest to both police officers and clinicians.

In the third major part of this volume, 'Enhancing lie-detection accuracy', the focus is turned to those trying to detect deception. In Chapter 10, *Leif Strömwall*, *Pär Anders Granhag*, and *Maria Hartwig* review the research on practitioners' beliefs about deception. Three of the questions the authors try to answer are: Where do beliefs come from? What are the consequences of wrongful beliefs? and How do we come to terms with wrongful beliefs? *Ray Bull* reviews and evaluates the scientific attempts that have been made at training people to be better at detecting deception in Chapter 11. Are there any training programmes that have been successful in enhancing lay people's and professionals' deception detection ability? Perhaps some people do not need to be trained to be successful at lie detection. In Chapter 12, *Maureen O'Sullivan* and *Paul Ekman* describe how they came to identify people who are very good at detecting deception, and what characterises these 'wizards'. This chapter is based on interesting and fresh data from their on-going 'Diogenes' project. Finally, in Chapter 13, *Aldert Vrij* provides the lie-catcher with no less than fifteen scientifically based guidelines. This comprehensive and up-to-date chapter brings together most of what is known in the field of interviewing to detect deception, and thus should be especially useful for those working in the field.

Readership

We hope that this state-of-the-field volume will be of interest to the many different groups of practitioners found within the legal domain, such as judges, lawyers, prosecutors, police officers, customs officers and

migration board personnel. We also believe that the book will be a valuable source of information for those groups of professionals who have to tackle questions of credibility and reliability, such as journalists, professionals who conduct job interviews, security personnel, insurance personnel, negotiators, and the military. Furthermore, as the contributors themselves are experienced and very well-known researchers, we hope the book will attract both students (at different levels) and researchers within the field of psychology and law.

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