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Verbal and Non-verbal Symptoms of Deception in the Eyes of Policemen and Psychologists[1]

Вербальные и невербальные симптомы лжи – точка зрения полицейских и психологов

Key words: detection of deception, verbal symptoms of deception, behavioural symptoms of deception, verbal cues of deception, behavioural cues of deception, interview, interrogation

Abstract

The objective of the study was to test how selected respondents (psychologists and police officers) evaluate the diagnostic value of symptoms (cues) of deception listed in literature on the subject. To achieve that, 16 verbal and non-verbal (behavioural) symp-

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toms listed in literature as most typical and most frequently accompanying deceit were ever located by 100 police officers and 101 psychologists (n=201).

Their task was to group the symptoms according to the following categories: "often present", "rarely present", and "never present". Both the groups of respondents claimed that in their work they have to frequently decide whether their interlocutors tell the truth or lie, and are convinced that they are capable of accurate detection of deception through their assessment of verbal and non-verbal (behavioural) symptoms accompanying lie. The latter belief is clearly refuted by the results of all known experimental studies.

In fact, police officers and psychologists agreed that the most diagnostic symptom is "avoidance of eye contact" (143 respondents categorised it as often present). "High frequency of eye blinking" was considered least diagnostic of the symptoms, with only 47 respondents claiming that it is frequent, together with "head scratching" with 51 considering it as occurring "often"). Convergence of the respondents' opinions was high. No significant differences between the occupational and age groups, and genders were discovered. The results of the study remain coherent with the results of studies by other authors maintaining that the skill of detecting deception in the interlocutor is determined neither by education, nor occupation, nor gender, nor the age of the person performing the detection.

Introduction

Literature has gathered sufficiently large body of proofs to support the claim that, against general convictions, police officers (as well as officers of special and customs services) do not recognise lies better than representatives of other professions and social groups (Kraut, Poe 1980; Kohnken 1987; Vrij 1993; Vrij 1994; Akehurst, Kohnken, Vrij 1996; Vrij, Van Dalen, Van Wijngaarden, Foppes 1996; Vrij, Semin 1996; Strömwall, Granhag 2003; Lakhani, Taylor 2003; Vrij, Taylor 2003; Strömwall, Granhag 2003; Granhag, Andersson, Stromwall 2004; Granhag, Stromwall, Harwig 2005; Vrij, Man 2005; Ulatowska 2005, Mann, Vrij 2006; Colwell, Miller, Miller 2006; Vrij, Semin 2006; and Ulatowska 2009).

Moreover, a conclusion was reached in experimental studies, that prisoners detect deception slightly better than special forces officers. Other experimental studies demonstrated that women are better than men in reading non-verbal behaviours of other people, especially in reading facial expression, and followed a larger number of behavioural symptoms (cues) in their judgements of veracity. It was noted that women from the countries where their social position is lower are relatively most accurate in the detection of deception (Hurd, Noller 1988; De Paulo, Epstein, Wyer 1993).

Representatives of the profession in which the skill of assessing the interlocutor's truthfulness seems important, i.e. lawyers, police officers, teachers, and psychologists, believe, usually ungroundedly, that they can use their assessment of verbal and behavioural symptoms to detect a lie (Colwell, Miller, Miller, Lyons 2006; Mann, Vrij 2006; Vrij 2009; Okrasa 2010).

As the Polish forensic practice demonstrates, expert psychologists participating in interrogations, are sometimes requested by the court or prosecutor to assess witness veracity, a service they do not as a rule refuse.

Such a procedure remains at odds with the results of experimental research investigating the accuracy of such judgements. The listing of results of 39 experimental studies conducted by different authors in different countries in 1980–99 demonstrates that accurate recognition of lie based on the assessment of verbal and non-verbal symptoms accompanying it occurred in 31–63% of cases. The average value of correct recognition of deception based on these factors was 58%. Moreover, as Vrij (Vrij 2008) found and demonstrated, it was easier to confirm truthfulness (on average 67% of correct reports) than lie with only 44% of correct answers. Similar results were obtained in Polish experimental studies by Ulatowska (Ulatowska 2009).

The results obtained remain permanently above statistical chance and bear out that lie can be detected on the grounds of the assessment of verbal and non-verbal symptoms, yet the number of correct judgements is decidedly lower than in polygraph examinations and other methods accepted as capable of providing proofs in criminal cases (Widacki 1977; Widacki, Horvath 1978; Vrij 2008; Widacki 2008; Vrij 2009).

However, obtaining results that are generally constantly above the statistical chance by non-instrumental methods proves that they are not chance or random. This supports the rationality for further research, aimed especially at improving the diagnostic value of the method, and identifying the limits of its efficiency and reasons of deficiencies.

Perhaps an infallible standard of verbal and non-verbal symptoms accompanying lie should be defined individually for every human being. This would require an assumption that an "individual language of lie" exists, not unlike the language of an individual (idiolect) distinguished by linguists (Feluś 1976). That "individual language" consists of body language and other symptoms that the process of communication consists of. It needs testing whether such a pattern can also be determined at supra-individual level, for example, for people with a specific type of personality; such an assumption can be theoretically justified.

An assumption that there may be no universal complex of verbal and non-verbal symptoms accompanying lie, and therefore that such complexes must be sought for individ-

ual personality types, has already been presented in literature (Riggio, Fridman 1983; Sigman, Reynolds 1983; Vrij 2008; Vrij 2009).

Purpose of research

The main purpose of research was to test how the respondents we have selected assess the diagnostic value of symptoms of deception mentioned in literature on the subject.

First, we selected for our study experts performing such activities in their everyday work. They were a group of police officers from investigation divisions and psychologists. Secondly, we agreed a list of symptoms accompanying lie (deception) based on the most frequently repeated descriptions recurring in expert literature, and eliminated the least popular ones.

At the same time we wanted to test whether there are differences in the assessment of diagnostic quality of the symptoms of deception between the groups of police officers and psychologists included in the study, or whether both follow a single pattern. The answer to this question indirectly answers the question whether the skill of recognising lie depends on education and theoretical background of the person conducting the recognition, or does it rather depend on other factors, for example, life experience, including professional experience. We also considered the above important due to the fact that there is a proven connection between the knowledge of lie indicators and efficiency of its detection (Ulatowska 2011).

Moreover, we wanted to find out whether police officers and psychologists, as we could expect on the grounds of previous knowledge, are convinced that they can accurately recognise lie based on the judgement of verbal and non-verbal symptoms. This is important, as in practical cases, the future of the defendant (accused) and witnesses may depend on their judgements of individual's truthfulness, and so does the later course of an investigation, and the whole criminal case.

In our notional model for the detection of lie by a person trained for the purpose, we also accounted for additional traits that influence efficiency of action. We wanted to test whether the sex and professional experience have any bearing on the selection of specific symptoms of lie. In other words, we wanted to test whether women and men working for the police base their judgements of truthfulness on the same symptoms, and whether police officers with different duration of professional service pay attention to the same symptoms of lie, and judge them in the same manner.

Composition of the sample

The sample was of quota type, as two homogenous professional groups (50-50) performing identical actions and using identical skills in their professional work have been selected. We construe the group of all respondents as homogenous in using the same skill: recognition of symptoms of lie (deception). The group can be divided into two types, accounting for two professions, which, however, remain internally uniform. We focus on the similarities in the work performed by all the subjects, and not on the internal differentiation within the groups and statistical verification of causal relations. The method of sample selection reminds of qualitative expert studies using a standardised interview questionnaire.

There were 201 people, 100 police officers and 101 psychologists, participating in the experiment. The two professional groups were selected with respect to their contact with various people, while the nature of their professional work often makes them assess whether the interlocutor (interrogated or questioned) tells the truth or lies.

The police officers examined in the experiment came from three regional police HQs. All (available) officers from the policeman and investigation/officers of intelligence divisions in the first two HQs were examined, while only the number necessary to bring the number of respondents to 100 were examined in the third. The group consisted of 40 women and 60 man. The average age was 37.4, with age span from 23 to 56.

The duration of professional service of the psychologists was fairly differentiated, as their number included both experienced court experts (it is hard to collect a group of 100 consisting solely of such experts) as well as individuals only starting their professional life. The group consisted of 72 women and 29 men. The average age was 28, with the extremes at 21 and 58.

The method

The respondents were given a questionnaire composed of two sections to fill. In the first section, there were asked to answer whether they must assess interlocutor's truthfulness at work, whether they believe they can do it dependably, and how they perform such activity.

The main task of the respondents was to determine the frequency at which they believe the selected behaviours that most frequently accompany lie according to literature are present on a three-degree scale ("always accompany", "sometimes accompany", and

"never accompany") (Akehurst, Kohnkonen, Vrij, Bull 1996; Taylor, Vrij 2001; Vrij, Semin 1996; Westcott, Davis, Cliford 1991). The list contained both verbal and non-verbal symptoms (cues) and included:

– an unnatural tone of the voice;
– hesitation while talking;
– raised pitch of the voice;
– language errors (including repetition and breaking off of words and sentences);
– pauses and periods of silence while producing sentences;
– avoidance of eye contact;
– hand and foot fidgeting;
– gestures correcting the clothing;
– high frequency of eye blinking;
– touching nose, eyes, lips, and/or ears;
– frequent posture shifts;
– manipulating nearby objects;
– nervous movements of hands and/or fingers;
– head scratching;
– artificial smiles;
– nervous swallowing of saliva.

Wherever the respondents admitted that rather than a single universal standard of lie/deception there are different ones, proper for various personality types of the deceptive individual, in the second sequence of the questionnaire, they were given the task to select the symptoms of insincerity listed in the first part that they believed characteristic of individual personality types (according to the generally accepted classification introduced by Eysenck).

Analysis of the collected material

Our aim is a comprehensive approach to the phenomenon of assessment of symptoms of deception by people performing specific professional duties. Those people are a uniform, homogenous cohort, at least as far as the nature and manner of performing their professional duties are concerned. We wanted to test how the people who make use, also practical, of their knowledge of symptoms of deception treat these symptoms. We shall consider their opinion as an indicator of the condition of the phenomenon. Should they believe that symptoms that allow judgements of deception exist, they will consider them possible to detect ("sometimes" or "often"). However, if they have doubts concerning specific symptoms, they should avoid them ("never"). First comes the analysis of the group composed indiscriminately of police officers and psychologists who are

simply representatives of "detectors of deception". Using table and graphic presentation procedures, we assigned the answers to categories, and compared them for different groups (properties). For the purpose of this article we use simple albeit clear graphic presentation. It includes both the numbers of specific answers (absolute numbers in categories selected by the respondents) and the percent breakdown of all categories of answers for each of the 16 symptoms. The percentage values refer to the total N=201.

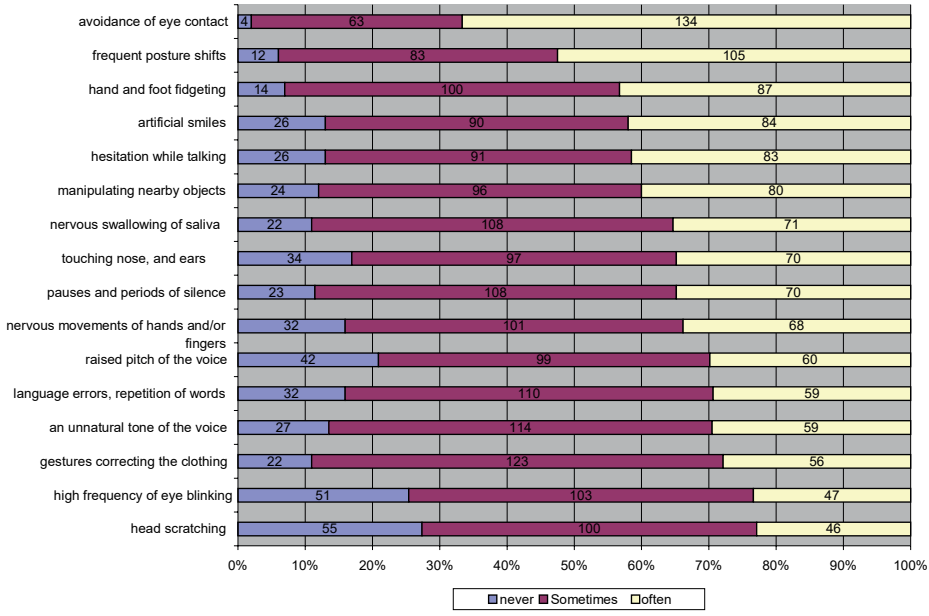

Fig. No. 1: Assessment of the diagnostic quality of 16 symptoms of deception by police officers and psychologists jointly.

This graph brings together the answers of 201 respondents to 16 successive questions, offering three alternative answers each. Its analysis aims at determining differences (the breakdowns of variables serve comparisons between the values for individual properties) and determining where a category of the answers "wins" or "loses" (i.e. is represented by the longest or shortest section) with others.

There are no pronounced differences, and the most popular categories generally lie in the centre (in the "sometimes" category). This means that respondents are cautious in their judgements, and they neither firmly trust the symptoms (the "often" category on the right) nor do they rule them out (the "never" category on the left). Their answers

are cautious. The category "often" only dominates for a single symptom: "avoidance of eye contact".

Let us, however, consider how to understand the low share of the "never" category in the answers presented above. As our investigation shows, the whole set of symptoms was believed to characterise deception, and avoidance was only assigned in quite a low percentage (with the highest proportion of answers around one fourth, 27% out of N=201). All respondents made use of the whole set of symptoms, and did not consider any as useless. We do not know whether in this way the respondents declare that they happen to use all the symptoms at work or that they have their different favourite sets. We asked them whether they see a connection between symptoms and the fact that somebody lies. The symptoms we use are popular as far that they are mentioned in expert literature and at training events. Therefore, we perhaps gathered insight whether respondents know such elements and have heard of them, and therefore recognise them. To sum up: the cohort construed as a whole links the given symptoms to the potential of detection of deception.

To complement our knowledge, we checked whether individual respondents often displayed a tendency to choose the answer "never" (maximum value for a single respondent was 16, while no one (0 people) reported that the whole set was useful. If somebody used the answer "never" for more than 10 symptoms, he or she would be sceptical about the possibility of detecting deception with non-instrumental methods. As such people few were, the results do not show lack of acceptance for the presented symptoms of deception. Summing up, no symptom was considered unfit for recognising deception and rejected. However, doubts (over 20%) are relatively frequently encountered in the case of two symptoms: high frequency of eye blinking (25.4%) and head scratching (27.4%).

As the presented set holds no elements to be rejected by people judging deception, we want to determine whether our respondents consider some of the 16 symptoms offered as working especially well in the detection of deception. The answers show that there is no such set. Only one symptom – avoidance of eye contact – was singled out by the respondents. All the remaining ones are treated as "sometimes" (most numerous answers) or "often" suitable, however, the variability of the respondents' answers is very high. A conclusion can be drawn that each respondent proposes a different conglomerate of symptoms that allow detection of deception: there is no popular and averaged set (universal for everyone performing such professional duties). We find no clear markers that would mean that this or that symptom can be used for the detection of deception certainly and in every case. Most answers fall in the cautious category, meaning that the respondents believe the given symptom to work, albeit only under certain conditions. The investigated cohort shows no tendencies or, for our broad picture, tendencies in

their actions. The wide extent of the central category ("sometimes") means that the subjects neither declare rejection (strong mistrust) nor full acceptance (trust) of individual symptoms. A large majority are undecided about no fewer than 15 symptoms. Nothing suggests radicalisation of views. Generally, it can be stated that the respondents believe that all the symptoms are rather fit for the detection of deception.

A search for changes in the categories of independent variables in cross tables brought no results. The opinions concerning 16 symptoms are nearly identical for women and men, insignificantly different for different age groups and for people with different duration of professional experience or service. The only slight differences can be noticed when professional groups are compared. Psychologists and police officers approach the assessment of diagnostic quality of the symptoms differently. It is not a difference that would result in a structure of different actions. This is how we understand the expectation that representatives of individual subgroups would apply different sets of activities or standards. No such divisions can be found in this case and yet everyone proposes similar opinions (declaring lack of strong conviction that a symptom be applied), however, either professional group makes a different use of this hesitation. Scopes for police officers in categories "never" and "often" far more narrow. In their case, the central category expands towards both extremities, as they are far more cautious and sceptical in their opinions than the other group. In turn, psychologists represent a more narrow central category, its space being taken over by more radical judgements. To generalise, police officers are cautious in their opinions, yet they may treat symptoms as something ancillary in the professional duties they perform: in their activity, they are more like craftsmen internalising abstract principles. In turn, psychologists treat knowledge as something that can be brought into agreement through arguments, and try to ascertain a relationship between their practical endeavours and elements of the theory, which leads to a disheartening conclusion that they are the ones who more strongly trust the reliability of their knowledge and own infallibility.

Significant tendencies in opposing behaviours of the two groups concern two symptoms: "an unnatural tone of the voice" and "raised pitch of the voice." The tables should be read as follows: the total percentage on the right-hand side of the table (in a single row) is compared with the cells in the same row. The interesting values are those that lie above or below the total percentage (construed as average opinion of the uniform cohort of police officers and psychologists) that show how many more or fewer opinions of a given type are expressed by the police officers as compared to psychologists. If one belongs to a given professional group, we examine whether and how differently he or she believes, in comparison with the collective opinion of all the respondents (both professional groups together). This is to show whether there are professional groups that are especially eager (or reluctant) about the diagnosed symptoms. Full flow of ten-

dency exists in the case when we find a greater deviation from the average percentage on the one hand, and smaller on the other: if the answers of police officers are below the average percentage, psychologists should do the same in a number greater than the average percentage.

Table No 1: Opinion about the symptom "an unnatural tone of the voice" broken by the professional group

	Group		**Total**
	Police officers (count % in the group)	**Psychologists** (count % in the group)	
Never	11 (11%)	16 (15,8%)	**27 (13,5%)**
Sometimes	70 (70%)	44 (43,6%)	**114 (56,7%)**
Often	19 (19%)	41 (40,6%)	**60 (29,8%)**

Table No 2: Opinion about the symptom "raised pitch of the voice" broken by the professional group

	Group		**Total**
	Police officers (count % in the group)	**Psychologists** (count % in the group)	
Never	12 (6%)	30 (14,9%)	**42 (20,9%)**
Sometimes	63 (31,4%)	36 (17,9%)	**99 (49,3%)**
Often	25 (12,5%)	35 (17,3%)	**60 (29,8%)**

In the following sequence, we asked whether respondents believe that the set of symptoms characteristic of deception is universal, or different, connected to the personality type of the deceiver.

According to 82% of police officers who answered the question, symptoms of deception are connected to the type of personality, 7% of the respondents believe that the symptoms of lie manifested in behaviour are not connected to personality type, and

11% do not have fixed opinion. According to 87% of psychologists symptoms of deception are connected to personality type, 8% believe that there is no such correlation, and 5% are of no fixed opinion.

We later asked the respondents to separately assign symptoms that best fit each type of personality. Contrary to the anticipations, this provided no precise structure, nonetheless, a handful of symptoms most frequently associated with type of personality can be listed.

Symptoms "artificial smiles" and "raised pitch of the voice" are the ones that respondents believed to be characteristic of extroverts. "Avoidance of eye contact", "pauses and periods of silence while producing sentences" and "hesitation while talking, using such expressions as hmm and err" are symptoms of deception characteristic for introverts. According to the respondents, the symptoms of deception typical of neurotics are "fidgeting with legs and feet", "gestures correcting the clothing", "high frequency of eye blinking", "frequent posture shifts", "nervous movements of hands and/or fingers" (e.g. tapping the fingers on the table), " language errors (including repetition and breaking off of words and sentences)", "nervous swallowing of saliva", and "manipulating nearby objects".

Closing, we discuss answers to one of the questions we found most important, controlling the respondent's conviction about his or her ability to detect deception accurately. 75% of police officers in the study believe themselves capable of accurate assessment of truthfulness of their interlocutor, 23% do not know how to detect symptoms of lie efficiently, and only 2% of the police officers in the study assume they cannot accurately judge the veracity of their interlocutor. In turn, 69% of psychologists in the study believe they can accurately verify the truthfulness of their interlocutor, only 4% declare that they cannot assess the veracity of the interlocutor, and 27% have no fixed opinion on the subject.

Conclusions

The study confirmed that a great majority of both police officers and psychologists are convinced that they possess the skill of accurate detection of deception. They presented such a conviction, although according to our knowledge, it remains inconsistent with previous experimental studies.

The study failed to define a catalogue of symptoms (both verbal and non-verbal) used by police officers and psychologists to assess the credibility of the interlocutor. Representatives of both professional groups judge lie on the grounds of the same

symptoms, however only applying each of them "to a small degree". We only determined a single symptom that enjoys the trust of all the respondents (higher only with respect to the others) as well as two symptoms with relatively low level of trust. Generally, respondents display reservation towards all the symptoms and are not certain about their diagnostic quality, altogether avoiding radical judgements. There is therefore no single set of features that would help in the detection of deception; there is no popular system of operation, all we deal with is cautious application of "everything, just in case". Every symptom may come in handy, and none are best, infallible, or redundant.

The claim that neither education, nor profession, nor sex influence the choice of symptoms used for detection of deception can be considered justified. The decisions are rather based on life experiences of the persons performing the detection. With one reservation, however, namely that the two professional groups approach the individual symptoms slightly differently. This, however, is not a nuanced catalogue of symptoms to be used but only a difference in the caution in approaching symptoms; a somewhat different degree of trust: lower in police officers and higher (more radical) in psychologists.

As much as the two groups in the study are similar in the cautious assessment of usefulness of symptoms for the detection of deception, they differ significantly in their choice of sets of these elements. Every respondent has own, slightly different, catalogue of lie detection symptoms.

According to our study, the respondents can accurately detect lie while performing their work. They do not trust a selected set of symptoms, are cautious in the judgement of diagnostic suitability ("rather" useful, i.e. "sometimes" symptomatic), and use them all in different configurations, not abandoning any altogether. They recognise that the individual symptoms may be aligned with the type of personality of the interlocutor (potential liar). This is why we have come to the conclusion that it is worthwhile to embark on a study aimed at determining an individually developed set of lie detection symptoms adjusted to individually construed types of personality. The conclusions presented here may be applied along two lines. First, we believe that every individual behaves slightly different, in a manner proper for them, and consequently also has his or her individual set of lie syndromes. Secondly, knowing about the differentiation among the people whose behaviour they are to investigate, each person detecting deception applies an own "key", depending on the assessment of the person and situation.

As far as recommendations concerning further preparation of staff for investigative procedures are concerned, the results of our studies show that:

1. Training of police, special force, customs and similar offices in the detection of deception using verbal and behavioural symptoms should emphasise the limitations of the method and they need to formulate non-categorical conclusions derived from this routine.
2. Expert psychologists should refrain from issuing judgements on veracity of persons interrogated in their presence on the grounds of observation of verbal and non-verbal symptoms.

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