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THE INFLUENCE OF TRAINING ON DETECTING LYING IN LANGUAGE: A CASE STUDY OF NATIVE SPEAKERS OF POLISH USING ENGLISH AS A LEARNED LANGUAGE

Introduction

Deception among individuals seems to be so common that it appears to be an inseparable part of life. Deception is “an act that is intended to foster in another person a belief or understanding which the deceiver considers false” (Zuckerman, DePaulo, Rosenthal 1981, p. 3). The techniques and methods employed to deceive others also become more complex while technology has advanced. A review of the literature allows a suggestion that lie detection accuracy, while different from perfect, is somewhat greater than would be anticipated by a flip of a coin (DePaulo, Pfeifer 1986; DePaulo, Kirkendol, Tang, O’Brien 1988). However, some researchers have observed that the average lie detection capability is no better than that achieved by random chance (Ekman, O’Sullivan 1991). The correctness of lie detection differs depending on the techniques exploited to determine judgments (i.e., wrong Cues), or even the personality of the lie catcher. For example, Bella DePaulo (1994) observed that individuals who are regarded high in social anxiety achieved worse results at lie detection than those with lower ratings.

Assuming that the capability and means to detect deception are crucial in various contexts and across disciplines, examination of the detection of deception conveys vast implications. Research has indicated that some ‘lie catchers’ are constantly better judges of interpersonal deception than others, assuming that a person who gains characteristics or skills of assessing deceit will subsequently become more accurate at deception evaluations. Yet, three deception studies (DePaulo, Pfeifer 1986; Ekman, O’Sullivan 1991) engaging qualified police officers showed that the officers were not able to detect deception above the chance level. Only the accuracy rate was verified in these

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studies, not the cues on which the police officers founded their assessments. In the current study, these limitations are addressed. Respondents were requested to suggest the cues they employed when judging truth or lying and to evaluate the significance of these cues on a seven-point Likert scale. A deeper understanding of the deceivers' and the observers' perceptions subsequently offered some explanation for the conflicting findings noticed in other responses.

The current study endeavours to further examine the relationship between an observers' confidence, job experience, as well as lie detection accuracy by reproducing the methodologies applied in earlier studies (Ekman 1973). To better comprehend lies in other cultures, this study combines measures of emotion (Ekman, Freison 1975) and other non-verbal behavior (Vrij 2000) in the evaluation of deceit in a laboratory experiment.

On the other hand, research on the detection of deception appears to be still inadequate. Presently, there are few studies that intend to investigate, for example, the relationship between 'foreign language use' and 'emotional expressions'. The capability to decipher facial expressions and the detection of deception appear to be to a certain extent connected with a person's cultural background and manipulation of language. To sound convincing, the deceiver ought to present a lie in a style that gives the impression of being honest (Friedman, Tucker 1990). According to Aldert Vrij (2000), lying entails more cognitive resources, therefore, despite efforts to control behavior, liars will produce specific sets of behaviors that are symptomatic of deception. Based on the assumption that lying in one's second language involves more cognitive resources, it can be suggested that liars might show various patterns of non-verbal behavior that are related to deception.

Taking into consideration the significance of precise lie detection or truth-verification in cross-cultural environment, the current study aims to examine and explore the influence of training and language on lie detection judgement accuracy by referring to the properties of language of deception.

Theoretical Background

Theoretical Models of detecting deception

Numerous theories of deception have been projected to extend the comprehension of the probable processes underlying deceptive behaviors. Miron Zuckerman et. al. suggested a theoretical framework identified as the four-factor model (Zuckerman, Driver 1985). Similarly, Judee Burgoon and David Buller (1994) established an approach identified as the 'interpersonal decep-

tion theory'. In accordance with the 'four-factor' model, four fundamental factors affect deceptive behavior, namely: arousal, attempted control, felt emotions, and cognitive effort. The first factor offered by this model was based on the postulation that individuals tend to be more anxious and aroused when lying than when telling the truth because of the fear of being caught, for protective reasons, or simply to thrive in the deceptive task (Goffman 1974). The second factor recommended that deceivers would try to monitor their behaviour when lying as a result of the fear of being caught. This proposed that it is difficult to screen all parts of the body while lying. Concerning 'felt emotions', the four-factor model recommended that deceptive behavior would frequently be related to negative emotions, such as guilt. Lastly, the fourth factor states that cognitive factors play a part in the way individuals behave when deceiving others. Specifically, it has been proposed that lying entails more extra cognitive effort than telling the truth, therefore, liars have a tendency to take more time to react, pause more when speaking, and distribute messages with fewer specifics (Vrij et al. 2000).

To a certain extent, *Interpersonal deception theory* shares features with the four-factor model by stating that to circumvent detection, deceivers will deliberately manipulate behavioral hints to look credible. Yet, unlike the four-factor model which emphasizes the role of the deceiver, this theory perceives deception as an '*interactional*' concept in which both senders and receivers cooperate concurrently when encoding and decoding deceptive messages. Interpersonal deception theory claims that a liar's communication contains both intentional (strategic) efforts to seem honest and unintentional (non-strategic) behaviors that are beyond the liar's control, and take place in the context of the detector's knowledge about the deceiver's possible approaches. It is the interaction between these circumstances that regulates how correctly lies are detected (Buller, Burgoon 1996).

Judgment Accuracy and Effects of Training

Laboratory and field research on a person's ability to detect lies has generally offered mixed results. So far, some studies have indicated that judgment accuracy in lie detection is frequently below what is anticipated by mere chance (Ekman 1992). Mark A. DeTurck (1991) observed that by offering lie detection training the detection of deceit in subjects who were measured as masterful deceivers was enhanced. He observed that untrained lie detectors are inclined to concentrate on verbal cues when assessing deception.

Indicators of deception

Vrij (2008) stated that there are three main methods to identify nonverbal

deceptive behavior: the emotional, the cognitive, and the attempted control approach. While the emotional approach proposes that the liar's internal feelings such as guilt, fear, or excitement will provoke a precise set of behaviors, the cognitive approach is associated with thought processes during deceptive efforts. Specifically, the cognitive approach claims that lying involves more cognitive resources than telling the truth, which consequently leads to more speech disturbances and slower speech speed. Lastly, the attempted control approach suggests that a liar will aim to control his/her behavior so as to appear as honest as possible. Paul Ekman and Wallace Friesen (1975) pointed out that the face is possibly the most expressive part of the body, even though individuals may effectively learn to evaluate their facial expressions to mask deception. They also claimed that the most facial hints of lying are micro-expressions, frequently, too delicate and rapid to be detected and interpreted by viewers.

Paul Ekman (1992) proposed that individuals tend to use more illustrators (i.e., body movements) when they are highly comprised in an event, and that such body movements help to put words together into a coherent message. Subsequently, illustrators are anticipated to decrease during deception, particularly when an individual is struggling with what to say or is involved by negative emotions, such as fear or anxiety. Assuming that individuals from various cultures differ in the exploitation of illustrators, it is also expected that Poles vary the number of illustrators employed when lying or telling the truth in English when compared with them speaking Polish.

According to Vrij (2000), individuals' seemingly poor capability to detect lies might be clarified by their failure to take into consideration individual differences and by concentrating on the wrong cues to detect deceit. Studies concerning deceptive behavior have indicated that people believe liars to have a higher pitched voice, make more speech hesitations and errors, have a longer response latency, pause more often, show more gaze aversion, smile more frequently, and display an increase in illustrators and foot movements (DePaulo et al. 1983, Vrij 2000). Assuming that language might affect the number of illustrators shown, this might in sequence influence observers' judgment accuracy.

Apart from the stereotypical viewpoint about the function of gaze aversion (which has been confirmed as untrustworthy), another stimulating stereotypical view worth addressing is the suggestion that when detecting lies, observers are frequently directed by the plausibility and consistency of the statements and the number of details stated (Vrij 2000). Still, a verbally skilled liar is just as likely to offer consistent and detailed statements

(Vrij 2000). Vrij (2000) stated that social conversation rules also prevent individuals from being suspicious of each other, which further limits their experience.

Culture and language

According to Ekman (1992), as individuals grow up, they absorb a set of 'display rules', which in turn rule one's emotional expressions without choice or conscious awareness. Once these display rules are well practiced and deeply in-built, they become habitual and function mechanically.

Previous studies that concentrated on inter-cultural communication observed that people learn to decode others' facial expressions to interpret accurately emotion cues and display rules (Hall 1984). David Matsumoto (1990) supported this by stating that differences in judgments are grounded on the existence of cultural decoding rules, and these rules generate tendencies for individuals of any culture to intensify, de-amplify, neutralize, or qualify their judgments. Therefore, given that each culture has its own prearranged styles that govern verbal and non-verbal behavior, it is significant for the lie catcher to clearly take account of them to avoid any misinterpretation or disbelieving-the-truth mistakes.

A report by Bruce Bower (2001) maintained the notion that the adoption of a foreign 'language' may play a significant role in the detection of deceit. In his study, videotapes were displayed during an interrogation to a murder suspect speaking in a foreign language. As the words were unrecognizable, they had to base their judgment employing nonverbal cues and speech intonation. The results were highly positive.

Study

The aims of the study:

Taking into consideration the aforementioned theories and aspects, the aim of this study is to investigate various kinds of changes in the quantity of non-verbal and verbal behavior exhibited by the deceivers and study the extent to which the abovementioned four factors influence the deceptive behavior of the participants. The subjects in the roles of deceivers and truth tellers were requested to rate the types of emotions they experienced during the interview, and to specify the level of cognitive difficulties experienced. In this study, particular attention is given to the evaluation of both factors (training and experience) in detecting lying by professionals in law enforcement jobs. One should take into consideration the fact that gender may play a crucial role in determining shaping and detecting lies, but it is not

discussed in this paper. Although the study aims at examining emotions within the same culture, it can be speculated that lying in different languages (1st vs. 2nd language) would cause changes in exhibited emotions or facial expressions (i.e., increase/decrease in the quantity of Cues displayed). If this is the case, emotion recognition may be predisposed when perceiving individuals lying in different languages. In this paper, it is apparent that variables like training, language, and culture may directly or interactively influence the participants' ability to precisely detect deception. Therefore, the current study offers an extension to earlier cultural studies about the role of verbal and non-verbal behavior in communication, and examines the extent to which training and language influence lie detection judgment accuracy among Polish speakers.

Hypotheses:

Using the Opinion Paradigm, a study was prepared to test the lie catchers' ability to judge the deception by individuals speaking in their mother tongue (Polish) or in their second language (English). As little is known about language variations and their effect on detecting deception, the current study is partially investigative. Particularly, the following hypotheses are tested:

- H1: Lying involves more cognitive resources than telling the truth.
- H2: Non-verbal and verbal cues vary for in a second speaking in their mother tongue (Polish) and the participants speaking in a second language (English).
- H3: Viewers will attain higher judgment accuracy when judging participants lying in their mother tongue (Polish) than participants speaking in a second language (English).

Experimental Design:

The experiment entailed a two (communication medium, Polish-English) by two (deception or truthfulness) between-subjects factorial design. To evaluate the participants' level of fluency in English, participants were requested to rate on a Likert scale (1 = Very Poor, 7 = Very Good) the following statement "Please indicate the degree of your English Proficiency". Those who evaluated their proficiency at or below 3 on this scale were rejected (2 participants were rejected out of the total number of participants).

This test was performed in two stages. First, an opinion survey involving 172 individuals was carried out, asking for their opinion about some debatable subjects counting the reinstatement of capital punishment, and other

moral issues (i.e., homosexuality, drugs legalization etc.). The following variables were taken into account while classifying the participants: age, gender, education. The participants were requested to rate for the strength of their opinion on a Likert-scale. Secondly, only those with strong opinions on certain subjects were chosen. The analysis specified that a number of participants held very strong opinions on the matter of capital punishment. Therefore, 40 different participants were randomly chosen for an interview and instructed to lie or tell the truth about their opinion. The partakers were randomly allocated to speak English (their second language). Out of 30 videos, 20 videos of the best content as well as sound quality were chosen. In addition, 3 people were finally recruited with voluntary consent: bilingual lawyers who claimed to be trained in detecting deception.

A fluent Polish-English bilingual experimenter (a police officer) conducted the procedure and the interview questions were asked in English or Polish, depending on the given condition. The interviewer in this study was blind to the experimental conditions in order to circumvent probable bias during the questioning phase. In the first part of the experiment, instructions were offered in a quiet discussion room. Each partaker was requested to read and then verbally trained (PART I).

In the second part of the experiment (PART II), each of the partakers was moved into an interview room and questioned by the interrogator. The whole interrogation process was recorded. Each partaker sat on a chair and was totally visible with the intention of their body movements and facial expression to be carefully checked. All the interrogation questions were standardized and a rapport was created in the first part of the interview on the experimental conditions. The moment each participant entered the room, the experimenter would introduce themselves by name and greet with a handshake. To personalize the interview, the interrogator was requested to adopt a friendly attitude throughout the interview. Later the interviewer went on to ask the following questions: 1) What is your opinion on the issue of 'X' (e.g., capital punishment)?; 2) Can you tell me why you hold such opinion?; 3) Did you make this up just a while ago?; 4) Is this really your true opinion?; 5) Are you lying to me now?

In the final part of the experiment (PART III), each of the partakers was requested to fill in a questionnaire regarding their confidence about deceiving others and their opinion about the test. General questions associated with the detection of deception were also involved.

Results and discussion

Judgment Accuracy

In this part of the study, 50 individuals in total participated, including 3 lawyers. As a result of the small number of partakers from the field of law or psychology, the lawyers were placed under the 'others' category. The study analyzed probable occupational differences in deception detecting. The overall judgment accuracy for this group was above the chance level = 68.33%, $t(27) = 10.01$, $p < 0.07$. Even though results showed no significant mean score variations across each of the conditions, the observers scored slightly better when partakers were lying in English (i.e., mean score for classifying Polish speaking liars = 67.84%, for English speaking liars = 74.08%). Similarly, the observers were more able to recognize truth tellers among the Polish speaking partakers than the English speaking participants (mean score for identifying Polish truth tellers = 70.78%, for English truth tellers = 63.74%). The outcomes showed large individual differences when recognizing Polish speaking liars, with scores ranging from 30.3% to 87.8%. On the other hand, the score distribution for the English speaking liars had a smaller range from 64.3% to 87.5%. Taken into consideration these discrepancies, the scores were divided into different categories. The outcomes indicated that most of the judgment scores grouped around the 63-82% categories for the English-speaking conditions. As for judging those under the Polish speaking circumstances, the scores were more evenly dispersed among different categories.

Moreover, an average exact response showed that while observers reached the highest judgment accuracy for English speaking deceivers, the lowest judgment accuracy was noticed among the English speaking truth tellers. Further investigation of individual video clippings indicated that for Clip 7 and 20; when partakers were telling the truth in English; the observers' judgments were simply grounded on the chance level (72%). A comprehensive behavioral analysis of these two video clippings showed that the partaker in Clip 7 was involved in a long period of gaze aversion (i.e., 22.7 seconds), more hand and arm movements (i.e., 40.7 times/interview), but mostly illustrators and foot and leg movements (i.e., 64 times/interview).

While the partaker in Clip 20 did not employ as many illustrators (i.e., 7 per interview), the person also presented a greater amount of foot and leg movements (i.e., 3 times/interview). In addition, the person presented the 'dry mouth' phenomena (i.e., AU 28) several times during the interview. The extra nonverbal movements exhibited that partakers experienced concern about being mistrusted and speaking in a second language (English)

contributed to their anxiety. Consequently, extra non-verbal behavior and changes in their baseline behavior might have caused confusion for the observers.

Controlled Behavioral Cues

To evaluate the possibility that the partakers might also understand that their non-verbal and verbal behavior varied while lying and telling the truth when employing their second language, the participants were asked whether they had tried to monitor the number of behavioral Cues displayed during the interview. Indeed, the results indicated that when telling the truth in English, the participants had clearly tried to control their direct eye-contact, speech hesitations, and changes in the pitch of voice than those speaking in Polish. Notwithstanding language conditions, the participants showed less control over non-verbal indicators of deception, like 'smiling and laugh', 'leg and foot movements', 'head and body movements' and 'micro-expressions' than truth tellers. Similarly, the deceivers also showed less control over verbal cues of deception, such as speech hesitations and changes in the pitch of voice. Prominently, lower control ratings were noticed among those lying in English than in Polish for most of the behavioral Cues.

Certainly, the partakers were conscious that their non-verbal and verbal behavior varied when employing their first and second language. As verbal and nonverbal cues of deception were less manageable when lying or telling the truth in English, this aids to clarify the observers' relatively better lie detection judgment accuracy with English-speaking deceivers and the low truth detection judgment accuracy (or false-positive errors) with English truth-tellers.

Cues

Even though it was expected that observers would create various kinds of cues to detect deception, no significant differences between the observers' and the deceivers' reliability ratings were detected for cues that are believed to be reliable in detecting deception. It was also observed that the viewers paid more attention to the cues that are easily controlled, like direct eye contacts (employed in 95.3% of cases when making judgment decisions), smile and laugh (75.8%) and hand/arm movements (74%). However, the viewers in this study also depended heavily on 'micro-expressions' (96%), which are not as easily manipulated. Although micro-expressions were believed to be a valuable indicator of deception, viewers in this study were not trained in facial recognition. Consequently, improvements on lie detection judgment accuracy were expected when specific micro-expressions trainings were presented.

Analysis of the 20 videos

Grounded on the scoring system implemented in Study 2, the participants' nonverbal and verbal behavior were yet again scored based on the same system. A transcript was typed and a comparison was made employing the mean scores of those who were lying and those who were telling the truth. Similarly, the mean scores of those lying in Polish and those lying in English were also related.

1. Gaze aversion (two coders: $r = 0.993$, $p < 0.01$)
2. Frequency of smiles and laughs (two coders: $r = 0.866$, $p < 0.01$)
3. Frequency of arm and hand movements (two coders: $r = 0.988$, $p < 0.01$)
4. Frequency of shaking, nodding, or other head movements (two coders: $r = 0.957$, $p < 0.01$)
5. Frequency of shoulder/trunk movements (i.e., shrugs) (two coders: $r = 0.925$, $p < 0.01$)
6. Frequency of foot/leg movements (two coders: $r = 0.984$, $p < 0.01$)
7. Frequency of saying 'ah' or 'mm' between words (two coders: $r = 0.979$, $p < 0.01$)
8. Speech errors (two coders: $r = 0.984$, $p < 0.01$)
9. Latency period Period of time between the question being asked and the answer being given (two coders: $r = 0.957$, $p < 0.01$)
10. Speech rate (two coders: $r = 0.988$, $p < 0.01$)
11. The number of changes in the pitch of voice (two coders: $r = 0.864$, $p < 0.01$).

A test of homogeneity (of variances) specified that 8 of the criteria have roughly a normal distribution, thus, ANOVA was carried out to investigate the possible mean differences across the experimental conditions. The results showed that while lying in English, the partakers showed relatively more gaze aversion, hand, and arm movements and trunk movements than the Polish-speaking deceivers. When it comes to paralinguistic features, the English-speaking deceivers were also involved in bigger response latency and changes in the pitch of voice than the Polish deceivers.

Even though the above discussed behavioural cues might be expected of a typical liar, the English-speaking truth tellers exhibited comparatively more non-verbal and verbal indicators of deception than the Polish-speaking truth tellers. Employing the equivalent form of ANOVA, the results specified substantial mean differences for speech errors. When the partakers were lying in English, they showed a tendency of making more speech errors than telling the truth, but speech errors were comparatively minimal when participants were lying in their native language.

Micro-expressions

Like in the case of Study 2, some uncharacteristic features of lying were apparent in the study of micro-expressions. For instance, the participant in Clip 15 accepted time postponing tactics by replying “Why? Why should I lie to you?” This person also indicated sign of surprise (i.e., eye-brows pulled up) while stating the above. It was also observed that several ‘slips of the tongue’ incidents, for instance, in Clip 2, appeared; the participant slipped out his true opinion by saying “This is not my opinion. . . sorry I really don’t believe in it”. Similarly, in Clip 15, when asked “Did you just make this up a while ago?”, the participant replied “Yes” after 10 seconds of suspension during which she intended to say ‘No’.

The participants in this study were to actively produce and construct reasons for the contradiction of their true opinion. Therefore, rather than employing passive strategies like ‘concealment’ or ‘omission’, active deceit (i.e., generating reasons) should entail more thinking and hence higher cognitive load. Undeniably, the deceivers in this study recognized lying to require more cognitive resources than the deceivers in the crime scenario (Likert Scale, mean = 6.05 for the deceivers in this study).

Some incongruence among the participants creating non-verbal and verbal response was observed while deceiving. For example, in Clip 3, when the interviewer asked if the person had just created the opinion a while ago, the contributor’s answer was accompanied by behavioral inconsistencies “No, essentially it has been a debate that’s been really (shrug and head shakes). . . I mean it’s been an issue forever...everyone talks about all the time (head shakes)”. Similarly, in Clip 9, when the interviewer asked “Are you lying to me now?”, the partaker’s replied ‘No’ but what followed were delicate head nods. This is also observable in Clip 16. While using the classic time delaying strategy (i.e., repeating the question), the participant in Clip 16 also showed signs of anxiety “the reason why drugs should be reinstated is because. . .”. Other signs of anxiety (i.e., Dry Mouth Phenomenon, Lip Wipe) were apparent in Clip 10 and 13. In this study, the liars felt that they

had articulated more emotion resembling those of ‘disgust’ and ‘surprise’ than the truth tellers, thus, the ‘opinion paradigm’ created a more genuine emotional conflict in the deceivers.

Language and Cognitive Resources

Similarly to the samples in Study 2 and in Study 3, the observers in this study also supposed that “it is easier to tell lies and avoid being detected when speaking in Polish” (mean = 7.37, $t(30) = 6.750$, $p < 0.07$). When it comes to the interaction between the cognitive factors and the language effects, the outcomes displayed no significant mean difference across the 4 experimental conditions ($F(3, 28) = 1.729$, $p > 0.07$). When the two language conditions (English/Polish) combined, the deceivers in this experiment felt that “lying requires significantly more cognitive resources” than the truth tellers (mean = 6.05 for the deceivers and mean = 7.5 for the truth tellers, $t(29) = 1.725$, $p < 0.07$). When each of the language conditions was examined distinctly, the English and the Polish-speaking deceivers allocated higher mean ratings to the above ‘cognitive statement’ than English and Polish-speaking truth tellers (mean = 5 for the English-speaking deceivers and 5.12 for Polish-speaking deceivers; mean = 6.15 for the English-speaking truth tellers and 7.78 for the Polish-speaking truth tellers).

Further evidence of the language effects was observed by requesting the participants to provide a response to the following “It is hard to create reasons to support the opinion I agree/disagree while appearing truthful/deceitful”. The outcomes displayed that the deceivers have comparatively more difficulties with explaining the reasons while appearing truthful than the truth tellers, even though the results were not significant (mean ratings for the deceivers = 4.69, mean ratings for the truth tellers = 3.93, $t(29) = 1.048$, $p > 0.07$). A one-way ANOVA indicated that no significant mean differences across the 4 experimental conditions appeared in terms of finding it problematic to explain the reasons for supporting/defending against one’s true opinion while appearing convincing.

The observers’ viewpoint on the effects of language on judgment accuracy was erratic. Specifically, while the observers thought that “it is easier to detect lies if others are speaking in Polish” (mean = 4.17, $t(26) = 2.092$, $p < 0.07$), they over-estimated their capability to precisely detect lies. For instance, while the partakers were lying by means of their first language, the spectators precisely recognized such instances in 66.9% of the viewers. However, when the participants were lying in their second language, the vie-

wers were essentially more able to identify the English deceivers in 73.08% of cases.

Observers' Perceived Effectiveness of Training

Similarly to earlier studies, the participants strongly believed/agree that "training will significantly improve their capability to detecting deception" with mean ratings = 7.45, $t(26) = 8.76$, $p < 0.07$. It might be that qualified participants have a stronger belief about a set of cues or specific cues that can be related to deception and thus become over-confident. Definitely, the viewers at large assigned higher consistency ratings and depended more on verbal indicators of deception than on non-verbal behaviors in their assessments. One exception to this is the perceived significance of the non-verbal indicator 'Gaze Aversion'. In this study, the observers looked for 'Gaze Aversion' in 95.7% of all cases when making lie detection judgments. Given that the majority of the viewers in this study had no previous training on lie detection, it was explored whether their confidence in detecting deception would 'decline' after watching the videos, in contrast to the 'inflation' observed among the trained partakers (Study 3).

Conclusion

Across all the studies, the partakers understood the significance of facial expressions (i.e., micro-expressions) in detecting deception. The fact that lying in another language may modify one's facial expression/emotion indicates that one cannot study the issue of lie detection without considering cultural factors. A better comprehension of the inconsistencies of communication patterns in different cultures would not only lead to more effective communication but also enhancement in lie detection judgment accuracy. Secondly, taking into consideration that the aptitude to decode non-verbal and verbal behavior is likely to be a result of learning and training rather than an inborn skill; intercultural training in combination with lie detection/interviewing training should exploit detection judgment accuracy, within or across cultures.

Approving hypothesis 1 and 2, non-verbal and verbal indicators of deception varied when the participants were lying and telling the truth in English rather than in Polish. Contrary to the expectations, the observers were comparatively better at recognizing the English-speaking liars than the Polish-speaking liars, thus, hypothesis 3 was rejected. More prominently, the figures showed that while the observers accomplished the highest judgment accuracy in spotting the English-speaking liars, they turned out the worst at

noticing the English-speaking truth tellers. On the whole, when the participants were lying or telling the truth in English, they showed comparatively more non-verbal and verbal indicators of deception than the Polish speakers.

Taking into account the aforementioned findings, it is possible to conclude that this study shows the direction for further studies. The need for information concerning deception detection seems to be strong, and the application of lie detection research to real life settings is substantial. Despite the problems with cross-cultural examinations (i.e., culture differences difficult to define and measure), the influence of cultural characteristics connected to lie detection appears to be a crucial area to investigate in the world in which cross-border/cross-culture investigation are increasingly common.

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USING ENGLISH AS A LEARNED LANGUAGE**

Keywords: lying in language, the role of lying, the role of a foreign language in lying.

The author of the article discusses the importance of detecting dishonesty in various cultures and presents the nature of dishonesty and its problematic assessment. The aims and the hypothesis tested in this study result from the analyses of foreign language learning. In the first part of the article, the author aims to introduce theoretical aspects of detecting lying, its nature, and the research results on the role of the basic factors in the lying process: training, trust, observers, language and culture, and their effectiveness in detecting lying. The study results are presented in the empirical part. The results are analysed in three stages, following the stages of the study being performed and the hypothesis verified. In the final part, the author presents the results showing a correlation between the variables.

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**WPŁYW TRENINGU NA WYKRYWANIE KŁAMSTWA W JĘZYKU:
STUDIUM PRZYPADKU NATYWNYCH MÓWCÓW JĘZYKA
POLSKIEGO POSŁUGUJĄCYCH SIĘ JĘZYKIEM ANGIELSKIM
JAKO JĘZYKIEM NABYTYM**

Słowa kluczowe: kłamstwo w języku, rola kłamstwa, rola języka obcego w kłamstwie.

W artykule autorka omawia znaczenie wykrywania oszustw w różnych kulturach i przedstawia charakter oszustwa i jego problematyczną ocenę. Cele i hipoteza testowana w prezentowanym projekcie badawczym są wynikiem analiz związanych z przyswajaniem języka obcego. Pierwsza część artykułu ma na celu wprowadzenie do teoretycznych aspektów wykrywania kłamstwa i jego swoistego charakteru, a także istotnych wyników badań dotyczących roli podstawowych czynników procesu: szkolenia, zaufania, obserwatorów, języka i kultury i ich skuteczności przy wykrywaniu kłamstw. Wyniki badań zostały przedstawione w części empirycznej. Analizowano je w trzech etapach, zgodnych z etapami realizacji badań i weryfikacji postawionych w nich hipotez. W podsumowaniu zostały przedstawione wnioski ukazujące korelację pomiędzy badanymi zmiennymi.