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Reading Faces: Ability to Recognise True and False Emotion

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Introduction

Emotions often have an opportunity to "become involved" in our relations with others and to determine the structure, characteristics, goals, and dynamics of those relations. Sometimes emotions enable us to feel a strong connection and closeness with others, but other times, they lead to remoteness and division (Ekman, 2003). Even when several of us experience the same emotions, especially primary ones, our emotional

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experiences are at the same time both universal and individually different (Ekman, 1982, 1984, 2003, 2016; Izard, 1990; Wallbott & Scherer, 1986).

Emotions make up a framework in which we view, review, and evaluate our relations and communications, and in which we try to guess and understand our own and other people's emotional states during interaction (Chovil, 1991; Ekman & Friesen, 2003; Frijda & Mesquita, 1994; Malatesta & Wilson, 1988). Observational experience with one's own emotions can be a significant prerequisite of accurate observation and understanding of other people's emotions, which can make us more socially adaptable and adequate. They also can make our relations with other people more predictable and stable (Eibl-Eibesfeldt, 1989; Ekman, 1992; Hochschild, 1983; Keltner, 2004).

The empirically proven connection between inner emotional states and their external manifestations indicates a high informational value of facial expressions and their important role in the exchange of emotions (Ekman, 2003; Kostić, 2014; Kostić & Chadee, 2015; Matsumoto & Hwang, 2011). This fact initiates significant questions on the inborn or acquired ability of the observer to accurately register and decipher presented emotions, thus making a clear distinction between the facial signals of spontaneously experienced emotions, on the one hand, and simulated emotions, on the other (Kostić, 1995).

In most social interactions, the human face is the most revealed and the most available region for our conversational partner to look at. In accordance with its rich expressive and communicative potentials, which are built by combining influences of biological and social factors, the human face attracts the attention of those who interact. It has an irreplaceable role in people's social life (Buck, 1988; Ekman, 1982; Frijda & Mesquita, 1994; Tomkins, 1962, 1963).

By emitting facial signals, social interaction is established and regulated (Chovil, 1991; Fridlund et al., 1990), whereby information, emotions, interpersonal attitudes, and influences are exchanged. In face-to-face interaction, when the participants can use both verbal and non-verbal modes of communication, emotions are more often guessed on the basis of non-verbal signals than on the basis of what is said, which is usually consciously controlled, unlike non-verbal means.

Ekman and Friesen (2003) emphasise that the human face is a complex system which uses different categories of facial signals (static and slow, artificial and rapid). These categories enable the face to send diverse messages—about gender, age, health, interpersonal attitudes, and emotions (Harper, Wiens, & Matarazzo, 1978; Knapp, Hall, & Horgan, 2014; Pantic & Bartlett, 2007). Our interest in this chapter is especially in moving faces, that is, rapid, dynamic facial signals that convey a conversational partner's emotions, and which those who interact try to bring into connection with the inner state of an individual. Unwilling and spontaneous emitting of these signals has an informative function, and willing emitting of the signals has a communicative one (Ekman, 1997; Kostić, 2014).

Because each participant in an interaction understands that the interlocutor's emotions influence the course, outcome, and quality of an interaction (Keltner, 2004), external signs of both positive and negative emotional states of the conversational partner represent equally precious social information that he/she tries to perceive, decipher, and understand in the right (accurate) way (Darwin, 1998; Ekman, 1993; Keltner & Ekman, 2000; Rosenberg & Ekman, 1994). This means that all who tend to establish efficient and fruitful social interactions have to be *sensitive* enough to notice visible signs of emotions on the faces of their conversational partners (Keltner & Kring, 1998). Do the participants of the interaction manage to accurately decipher the observed facial behaviours that are connected to sincere or false emotions of the conversational partner, and are there factors which disturb the process of interpretation of facial behaviours?

If the facial expressions of spontaneously experienced primary emotions have an evolutionary base (Ekman, 1993; Fridlund, 1994) and if they are universal (Ekman, Sorenson, & Friesen, 1969; Izard, 1971, 1990; Kostić, 1995) and independent of any differences that exist among people (Ekman, 1984; Lazarus, 1991; Levenson, 1992; Levenson, Ekman, & Friesen, 1990), is the ability for accurate interpretation of observed expressions also inborn? If the answer is affirmative, then, perhaps, a successful distinction between true and false expressions of emotions is not such a difficult task.

Deciphering Facial Expressions of Emotions: Easy or Difficult Task?

In what circumstances can the accurate deciphering of facial expressions of emotions be questioned? Can it become a complex and difficult task? The answer probably depends on certain characteristics of the observer, characteristics of the observed individual, and the conditions under which they meet (Ekman & Friesen, 2003). Besides the observer's interactive competence, and social and emotional intelligence (Salovey & Mayer, 1990), also significant is his/her early affective experiences (Bowlby, 1980), motives (Ekman & O'Sullivan, 1991), intrinsic interest in his/her conversational partner, profession, observational experience with his or her own emotions, and his culture background. The observed individual, on the other hand, can differ depending on his/her established individual emotional profile determined by antecedents of emotions, the speed of experiencing and expressing emotions, their intensity, duration, and the style of expression of an individual (Ekman, 2003).

Early Affective Experiences

Having taken into consideration the hard empirical evidence of universality, Ekman (2003) claimed that anyone who spontaneously experienced a certain primary emotion did not need to learn the way (how) to express it facially. Although he was not completely sure, Ekman (2003) believed that the ability of humans to accurately decipher facial signs of emotions was biologically determined. He also mentioned the possibility that the deciphering of facial behaviours connected to emotions was learned in early childhood, during which, among other things, "the preset instructions may be damaged or destroyed by severely disturbed early experience" (Ekman, 2003, p. 219).

In his evolution-ethological theory about the origin and development of human sensitivity, Bowlby (1982) pointed out the significance of the specific relationship between the mother and the child, which is formed in early childhood, and is maintained throughout the whole life, as a

dominant and consistent style of behaviour and interactive functioning of an individual. Early experiences and established patterns of affective attachment will be important for further development and formation of one's personality, and for its capacity to maintain behavioural and affective regulation (Stefanović Stanojević, 2014). In this sense, the *Theory of affective attachment* (Ainsworth, Blehar, Waters, & Wall, 1978; Bowlby, 1969), represents a good basis for understanding the capacity for emotional, social, and behavioural adaptiveness and adequacy of an individual.

What can ruin and jeopardise the inborn capacities of successful deciphering of the facial expressions of emotions during early childhood (Niedenthal, Brauer, Robin, & Innes-Ker, 2002)? To begin with, one factor is inadequate communication with a significant figure—the mother who is cold, distant, unreliable, not responsive enough, and who does not understand her baby's signals (Bartholomew, 1990; Cooper, Shaver, & Collins, 1998; Kobak & Sceery, 1988; Main & Weston, 1981; Masten & Palmer, 2019; Mikulincer & Florian, 1998; Rholes, Simpson, & Orina, 1999; Simpson, Rholes, & Nelligan, 1992; Sroufe & Waters, 1977; Stefanović Stanojević, Kostić, Steele, & Nedeljković, 2019). During the first months of life, daily interactive experiences with the mother build one's inner representation of the self as a being who deserves care, attention, and the mother's love. During this period, the child builds a positive model of himself/herself. Contrary to that, the negative inner model of the self comes from the experienced that a child is a being who does not receive attention from his/her mother because they are not worthy. According to the quality of the interaction, a positive idea is formed of the mother who is present, available, and who can recognise her child's signals. Thus, the inner representation of the mother is negative. The positive inner representations of the self and the mother reflect generalised expectations of the child about the positive functioning of the given affective relation in different situations, that is, about what the child can expect as a form of his/her own behaviour and the anticipated mother's response. Based on this, the child feels secure and has full trust in other people. In contrast, with negative inner models of the self and the mother, a child becomes insecure and does not believe that he/she will be protected and satisfied. Models are mostly complementary; they remain throughout adulthood and have influence on one's relations with

other people. Within the concept of affective attachment, a classification of individual differences has been made: the pattern of secure affective attachment, the pattern of avoidant affective attachment, and the pattern of ambivalent affective attachment (Ainsworth et al., 1978). Main also added the fourth pattern of "disorganised/disoriented" to this classification (Main & Solomon, 1986).

According to the theory of affective attachment (Ainsworth et al., 1978; Bowlby, 1969), certain strategies that the child builds and uses in his/her communication with an inadequate caregiver can compromise the child's inborn capacity for accurate identification of emotions. A child who notices on a caregiver's face the emotions that frighten or confuse him/her, and with which he/she cannot deal, does not recognise these emotions in order to protect himself/herself. Early-acquired strategies of self-protection can block or jeopardise the level of success in recognising facial expressions of emotions in adulthood as well.

This has been shown by the results of the research of relations between the recognition of emotion and adult attachment, on the population of students in Serbia (Stefanović Stanojević et al., 2019). The assumption on the differences in the accuracy of recognising emotions has been confirmed in students who belong to different patterns of affective attachment. The subjects who belonged to the secure affective pattern were more successful in identifying facial expressions of primary emotions in relation to the subjects who belonged to the insecure pattern (disorganised, preoccupied, and avoidant). It turned out that one of the important conditions that enables a successful interpretation of facial expressions of primary emotions (anger, contempt, disgust, fear, happiness, sadness, surprise) is the pattern of secure affective attachment. On the contrary, a high level of anxiety and avoidance in respondents disrupted the accuracy of observing basic emotions because their inner working models of the self and the others were more negative, and, therefore, the probability of their accurately recognising emotions was smaller.

Respondents with insecure patterns show higher scores on dimensions of anxiety and avoidance, affecting formation of a stable and integrated image of the self and maintenance of level of self-esteem (Kohut & Wolf, 1978; Stefanović Stanojević et al., 2019). Although similar to the problem of self-cohesion that occurs with those respondents with the high

scores on the aforementioned dimensions, Mikulincer and Shaver (2007) believe that they use different secondary strategies which reflect negatively on the accuracy of observing emotions in both of these groups. Those with a higher level of anxiety more often choose hyper-activating strategies, which contribute to even higher insecurity in one's self and the existing capacities, with increased doubt that they will be rejected socially. This high anxiety and insecurity lead to disorientation in observing social entities and expressions of emotions, especially the negative ones. That is why these subjects are not successful in recognising emotions (such as sadness, anger and contempt, disgust, happiness, fear, surprise) (Stefanović Stanojević et al., 2019).

Different secondary strategies, deactivating strategies, are used by individuals who have attained a high score on the dimension of avoidance. Such individuals are narcissistic, self-sufficient, non-emphatic, and defensive. They try to remove their fears of rejection by focusing on themselves and on their lack of interest in other people. A defensive, pseudo-positive image of oneself and a negative image of others reduce their need to observe other people and to decipher facial expressions of their emotional states, which is quite obvious in their unsuccessful interpretations of other people's emotions.

Lying About Emotions

> *We are neither transparent as the infant nor perfectly disguised. We can lie or be truthful, spot deceit or miss it, be misled or know the truth. We have a choice, that is our nature.* (Paul Ekman, *Telling Lies*, 2009b, p. 364)

Besides the signs of spontaneously experienced emotions on the individual's face, there are also signs of emotions which that individual has not yet experienced. There are also more complex situations, in which the signs of both experienced and non-experienced emotions occur simultaneously (Ekman, 2009b). The unwilling expressions of emotions are the result of changes in the neuromuscular activity. The willing, deceptive, facial expressions are the product of an individual's conscious intention to show what, in fact, one does not feel. The reasons for the occurrence of

facial signs of a simulated emotion can be very different. Sometimes they are entirely personal and connected to the motives and interests of an individual, and sometimes they come from the demands of the culture in which he/she lives. Although the functions of true and simulated facial expressions are completely different (i.e., informative, opposite to communicative), facial signs can be very similar, and sometimes they hardly can be distinguished (Ekman, 1997, 2009b). Failure to differentiate between the aforementioned categories of facial signs can aggravate the accurate observation and understanding of emotions, which can lead to negative interactive outcomes. The participant of the interaction who is not able to make a clear distinction between true and false facial expressions of emotions brings into question the structure and the quality of communication because he/she becomes interactively inadequate.

In most public situations, each culture usually tends to control, to a certain extent, the expressions of emotions of its members, especially when it comes to negative emotions. Members of a particular culture learn which emotion, and its intensity, is appropriate and which is inappropriate for expression in a situation (i.e., feeling rules, Hochschild, 1983). At the same time, each socialised member of a certain culture knows to whom he/she is allowed or not allowed to show emotion expressions. Culture-specific social norms guide members of that culture to hide signs of undesirable emotions, to weaken or strengthen their intensity, and to mask or block the visible signs of what they have felt. The norms are learned during childhood, and they become habits that are automatically applied and have been labelled as "display rules" of emotions (Ekman & Friesen, 1969). In what ways do the "display rules" change facial expression?

Signs of Hiding or Falsifying Emotions

In his book *Telling Lies* (2009b), Ekman states that the results of his multi-year research on facial behaviour and lying suggest two groups of signs that indicate lying through hiding or falsifying of an emotion. The first group of signs includes micro-expressions, squelched expressions, and muscle reflexes such as blinking, dilated pupils, redness, and paleness.

Such reflexes are not under the control of the will and are, therefore, good indicators of possible false expressions. The second group encompasses asymmetry, inconsistent duration, inconsistent location, and a false smile. One group of signs can point to an emotion that an individual has experienced and tried to hide, and another group tells us that an individual struggles to inhibit or mask the emotion he/she has experienced, although the observer is not clear as to what emotion it is. The latter group of signs is undoubtedly connected to a simulated unexperienced emotion.

There are many situations in which people tend not to express an "inappropriate" but still experienced emotion, investing all their effort in replacing and masking it with some other "more appropriate" one, which, in fact, they have not experienced. As we can see, the facial expression can be unwilling and true, but also willing and false. How can people manage to willingly control what appears automatically and unwillingly on their faces when they feel a certain emotion? Due to social acquisition and knowledge of the valid norms of the expression of emotions, an individual consciously tends to modify his/her facial expression and coordinate it with the appropriate social situation.

In an established hierarchy with defined status differences and superior and subordinate participants, the communication of subordinate individuals is inhibited displaying a lower level of openness and freedom. Let us imagine the moment in which a student is facing the fact that he/she has not passed an exam. He/she feels anger because he/she thinks that the professor was not objective and fair. The emotion of anger is awakened and nerve impulses automatically and unstoppably reach the facial muscles. The student could perhaps prevent those movements of his/her body that show the professor that he/she is angry, but he/she cannot prevent the activity of facial muscles which pull down the eyebrows, cause the tension in the lower eyelid, dilated nostrils, or tight lips. As a result of the acquired behaviour towards authority, the student can try to supress or mask the angry expression on his/her face by adding some other facial movements, such as stretching the lips into a smile. As a result of the easiness with which it is performed (only one muscle is activated—the zygomaticus major), a smile is often used as a mask to hide the negative emotion, but the presence of signs of the experienced negative emotion

and the unexperienced positive emotion provoke doubt in the conversational partner and perplexes him/her (Kostić, 2014).

Contrary to the need to hide an experienced but inappropriate emotion, there can be an interest in showing a certain unexperienced emotion, that is, in falsifying the existence of that emotion. Let us assume that a girl received an expensive gift in a luxurious package that has not made her feel joyous at all. She is astonished because the gift made her feel indifferent. She quickly concludes that the gift-giver does not reflect a refined taste, does not understand her needs, loves kitsch, and likes to emphasise his material wealth. She knows that it would be inappropriate not to be delighted. Therefore, she expresses joyous surprise, with fake laughter, loudly and for too long, thus rolling her eyes and forcefully lifting her eyebrows, pronouncing several meaningless sentences, including, among other things, that "she cannot believe that she has received exactly what she has wanted for so many years". It cannot be denied that she was full of good intentions. She did not want to openly hurt the person who had brought her a gift, so she felt the need to show an emotion that she did not feel. According to what she was taught, she should have shown both joy and gratitude. In order for all that to be more convincing, her reaction had to be more intensive. Any careful observer in this situation could have revealed that there was no genuine excitement. The girl tried to act out joyfulness, and on her face there appeared a configuration of features that only seemed to reflect expression of experienced joy. Willing, intentional movements of her facial muscles only looked like the movements of a joyous person. They were not the same.

In both situations, these individuals tried to *hide* or *falsify* their true feelings. They consciously aimed to deceive their conversational partner and lead him/her down the wrong path. The success of their lie directly depended on their ability to willingly control their facial muscles, to hide the presence of the revealing signs of true feelings, or to try to convincingly act out the emotion they had not actually experienced. In his book *Telling Lies*, Ekman (2009b) points out that lying is an integral part of social life and that it is hard to believe that there is someone who has never done it. Among those who "practise" lying, there are significant individual differences when it comes to frequency and success of lying. A small number of individuals can be labelled as perfectly controlled and as

very talented liars, while there are many more of those who are not, nor can they become. Still, from an early childhood, children are faced with the demands of adults to manage the expression of their emotions through hiding and falsifying emotions, strengthening or weakening the expressed emotions. Most people are more or less willing to meet these demands and to practise deceiving others (Ekman, 2009b). Due to the demands of their environment, people gain certain experience in coding fake facial expressions, but despite their self-confidence, they do not seem trained enough to decode them. Certain researchers examined the connection between one's confidence in one's own ability to discover lies and one's achieved success in detecting the signs of lying (Hartwig, Granhag, Strömwall, & Vrij, 2004; Strömwall & Granhag, 2003; Vrij & Baxter, 1999). The correlations were mostly low. Those individuals who were overly convinced that they were able to discover the hints of deceiving just by observing someone's behaviour did not achieve significantly higher scores than those people who did not have such confidence.

Motives—Professional Interests to Discover a Lie

Numerous researchers have tried to answer the question of whether people are able to reveal the signs of deception by observing someone's behaviour (DePaulo, 1994; DePaulo & Pfeifer, 1986; DePaulo, Stone, & Lassiter, 1985; Ekman & Friesen, 1974; Ekman & O'Sullivan, 1991; Ekman, O'Sullivan, & Frank, 1999; Zuckerman & Driver, 1985). The results did not indicate high skills of the observer.

Based on her own research in this field, DePaulo (1994) states that respondents mostly believe what they see or hear in presented video materials. In these studies, the respondents had the task to estimate who behaved sincerely and who lied and to what extent. Although the stimulus material included an equal number of true and false video messages, the respondents believed that there were more truthful messages than false ones. They were also more prone to believe in the truthfulness of expressed feelings towards an individual, as well as the validity of stated

preferences. However, they managed to perceive, to a certain extent, some differences between truthful and false statements of the stimulus individuals by estimating that false messages are more deceptive than true ones and less truthful than sincere ones. They were misled by false expressions and became convinced that the sincere individuals were the ones who were actually lying. The respondents did not manage to reveal facial signs testifying about the experienced emotion.

Toris and DePaulo (1984) also found that warnings about potential lies during an interview do not increase success in discrimination between truth and lie. The observers did not manage to see the difference between interviewed conversational partners who were sincere and those who were not. The individuals who had the assignment to lie were not perceived by observers as greater deceivers than were individuals who behaved sincerely. By examining gender differences in the ability to discover deception, researchers (DePaulo, 1994; Rosenthal & DePaulo, 1979) found that men were less prone to believe in the truthfulness of what they observed, and they thought that it was exaggerated, while women were convinced that the reaction was sincere. There were no significant gender differences in the ability of discriminating between the truth and the lie. The respondents of both genders perceived those who were insincere only as less reliable.

Ekman (2009b) analysed the results of the aforementioned studies in which the number of accurate evaluations was almost identical to the number of random guesses. He believed that there were reasons which led to these results, the first being the lack of intense emotional excitement in those who lied. A liar who expects great gain in case his/her lie "works", that is, great punishment in case the lie is discovered, is usually very excited about the actual act of lying and the uncertainty of the outcome.

During the process of lying, he/she can experience different feelings—the fear that his/her lie will be discovered and the feeling of guilt and exaltation that he/she has managed to deceive someone. If any of the awaken feelings is strong, it is very hard to control facial expression (Ekman & Frank, 1993). The face will reveal "treacherous" indicators of what is happening inside and what the liar has to hide or falsify. If those who lie are not motivated enough by expected gains or punishments,

which, in turn, lowers their excitement, they will not have problems because there will be no signs of emotions with which they will have to do something. This explanation sounds logical, because it is in accordance with the results of another research (DePaulo & Kirkendol, 1989) in which liars were highly motivated to be successful. They experienced strong emotions which were supposed to be hidden or falsified, so there were a lot of signs of deception on their faces, which the observers could have easily noticed.

Ekman states another significant explanation of the obtained. Namely, it is possible that the observers were not successful enough in discovering the lies because the facial behaviours of the individuals who were given directions to lie, that is, to behave sincerely, did not differ enough. Most researchers did not do the analysis of the recorded facial behaviour of individuals who were given the task to lie, so the experimenters did not know how many signs of deception actually there were on the individuals' faces. This was corrected in the research by Ekman and O'Sullivan (1991), in which the researchers conducted the analysis of the recorded material with the use of the measuring instrument Facial Action Coding System (FACS) (Ekman & Friesen, 1978).

By examining the ability of discovering the signs of deception in people who are in charge of law enforcement and highly motivated to discover the truth, and in psychiatrists, students, and other employees, Ekman and O'Sullivan (1991) state that only the Secret Service agents were significantly more accurate than others. The presented video material represented recordings of ten individuals who either lied or told the truth. The selected recordings were not particularly significant for respondents' occupations.

When the whole sample is considered, the research did not find significant correlations between accuracy of evaluation and gender, age, and professional experience of respondents. However, with those who were the best evaluators and who achieved the accuracy of 80% or higher (Secret Service and Federal polygraphers), it was concluded that age was negatively correlated with the ability to discover deception. Those who achieved the highest accuracy were under 40 years of age.

The study by Ekman and O'Sullivan (1991) provided evidence that some respondents, especially those who were highly motivated by their

occupations, were capable of "catching" a lie, while they relied on both non-verbal and verbal signs, showing pronounced sensitivity for noticing and deciphering subtle facial expressions.

Eight years after the aforementioned research, in the article "A Few Can Catch a Liar", Ekman, O'Sullivan, and Frank (1999) revealed the results of their new study. The respondents were members of three professional groups: two groups which included individuals who work at different law enforcement institutions and a group of clinical psychologists. What was common for these respondents was the professional motivation to successfully differentiate signs of insincere from sincere behaviour. Non-verbal sensitivity, experience, and training surely represented a significant basis for successful accomplishment of their job. When they evaluated the video recordings of individuals who spoke only the truth or who lied, the members of these professional groups achieved very high accuracy. The research showed that the members of the examined groups were capable of spotting very accurately the hints of deception and differentiate them from the elements of sincere behaviour, during the first showing of the presented video recordings in real time, without pausing, slowing down, or rewinding. This was the confirmation of earlier findings about the superior ability of agents employed at the Secret Service (Ekman & O'Sullivan, 1991). The sample of examined agents which was used at the time was small, and the researchers could not allow for wide generalisations. Moreover, there were many respondents within different groups who were unable to differentiate true from false behaviour.

Rehm and Andre (2005) also confirmed that respondents often do not know when other people are lying to them. This time, any artificial scenario was avoided. The offered scenario looked like a simulated natural social interaction and informal communication. The researchers allowed the respondents to act spontaneously, and they were not given instructions for what they should look at and what to notice during their face-to-face interaction. It turned out that when occupied with the conversation with the people opposite them, the respondents disregarded facial signs of deceit by not paying attention to what was happening on the face. There were a lot of obvious signs of deception—inconsistency between facial behaviour and the verbal framework of the conversation, facial

expression asymmetry, false smiles, and subtle expressions that the respondents did not manage to notice and decipher.

Micro-expressions that last less than a quarter of a second and that appear suddenly are the biggest problem for the observer. Although all the elements of experienced emotion are present in these expressions, the observer usually misses them because of their rapidity. Hiding or attempting to superimpose on to a micro-expression with another emotion, especially unexperienced and inconsistent with the particular situation, makes the situation even more complicated.

Mladenov (2016) tested the differences in the accuracy of spotting facial micro-expressions of primary emotions in relation to the professions of the assessors, which were dominantly directed at the work with people or with objects. The research made use of a set of 14 photographs that showed weak or controlled expressions of emotions of a single stimulus person (Ekman, 2003) and that were presented to the respondents for 60 milliseconds and provided the effect of micro-expressions. It was determined that the respondents oriented towards work with people spotted the emotions, on average, more accurately than did the respondents dominantly oriented towards work with objects. Thus it can be concluded that frequent direct communication with people is an important condition for a more successful recognition of facial expressions of emotions. People who work in healthcare recognised more accurately primary emotions than did laboratory technicians, IT engineers, engineers of technology, and blue-collar workers who dominantly use objects in their professions.

The scenario of presenting attitudes that are completely opposite to what the respondent may have imagined was used in unpublished research for a master's thesis (Stamenković, 2016) on a sample of students from Serbia in 2016. With the help of the FACS (Facial Action Coding System, Ekman & Friesen, 1978), the analysis of the recorded facial behaviour of the respondents in two situations was done: when they present their attitudes honestly and when they lie about their attitudes. The results of this research showed differences in facial behaviour of respondents in the two aforementioned situations. In the situation of lying, there were signs on the respondents' faces of suppressing and falsifying emotions, which testified to their dishonest behaviour. The following facial indicators of false

behaviour were established: micro-expressions, repressed expressions, false smiles, the asymmetry of the action of facial muscles, incongruity of the place in relation to verbal behaviour, more intensive movements of the head, neck, and look direction. There were no significant gender differences in facial behaviour of men and women in the situation of presenting attitudes dishonestly. When the ability of the new group of respondents to spot the signs of lying on the faces of the respondents who were presenting false attitudes was tested, it was at the level of random guesses.

Another unpublished research which was conducted for the master's thesis (Savić, 2014) utilised a sample of Serbian students. The main aim of this research was to test the hypothesis that in the presence of authority, the respondents would be insincerely laughing at jokes which they did not find funny, even at the jokes that are considered to be completely meaningless. The research was conducted in the following way: the person who could, according to his/her position, be the authority and who could exert social pressure showed the respondents a series of jokes, while their facial reactions were recorded by a hidden video camera. While the person who was the authority for the respondents was telling them jokes that were not funny at all, they reacted with "false", dishonest smiles. The false smile was asymmetric, without the equal activation of facial muscles on the left and the right sides of the face relative to the vertical axis, without wrinkles in the area around the outer eye angles, and without the appropriate duration (Frank, Ekman, & Friesen, 1993). The facial configuration of a false smile, which was voluntarily and consciously simulated, was completely different from the configuration of the honest smile—when the respondents were told really funny jokes (Ekman, Davidson, & Friesen, 1990; Frank & Ekman, 1993). The respondents' dishonest smiling, when they were told jokes that did not contain enough humorous elements, occurred just because they thought they were expected to laugh in a particular situation (i.e., the respondents experienced social pressure).

Video recordings of true and false smiles, which were obtained in the aforementioned research, were shown to another group of respondents. Their task was to tell the difference between these two categories of smiles. Despite clear differences which were determined with the help of FACS

(Facial Action Coding System, Ekman & Friesen, 1978), the respondents did not achieve the expected success.

How to Become a More Successful "Lie Catcher"?

The research results have shown that, in general, people are not very skilful in differentiating between facial expressions of experienced and unexperienced emotions (Ekman, 2009a). At least, they are not as skilful as they believe they are. It turns out that the achieved level of accuracy most often falls slightly above the level of random guessing.

The process of noticing differences between lies and the truth is a complex task that requires careful observation and search for the signs that tell us about deception (Ekman, 2003), as well as the analysis of the level of differentiation of signs, which point to specific information (Ekman, 2009a). The accurate recognition of signs of insincere behaviour is a useful skill because it provides a better understanding of important personal relations and better social adaptation (Kemeney et al., 2012). This is also a very important ability for those who deal with discovering lies professionally.

The difficulty of the task presented to the observer can grow due to several reasons, primarily because of an individually specific emotional profile of the observed person. The observed person can, for instance, be introverted and not expressive enough, can pay much attention to the regulation of his/her facial behaviour in public situations, and can be prone to systematic hiding or falsifying of emotions. The observer has to be able to overcome all of the aforementioned obstacles in order to reach an accurate interpretation of the observed facial behaviour. Individual differences regarding the situations that cause a particular emotion, as well as the differences in the time necessary for an emotion to be awakened and its duration and intensity can in the frequent occurrence of mixed emotions (blends), make the task of deciphering expressions quite difficult. All the controlled, masked, supressed, micro-expressions, and subtle expressions also make this process more complicated. Additionally,

early experience of being neglected or abused, as well as the insecure pattern of affective attachment and existing prejudices, negatively affect basic abilities of emotion interpretation.

Similarly, as there is a category of people who are naturally talented and perfectly controlled liars, there is also a category of those who have a very high ability for accurate recognition of false expressions—for example, Secret Service agents (Ekman et al., 1999; Ekman & O'Sullivan, 1991). But we do not know whether it is innate or developed or both.

By considering the possibilities for advancing this ability, Ekman (2004) suggests the procedure of formal training and individual practice of people in order to master efficient ways of discovering facial signs of deception. People should learn to carefully observe faces (Ekman, 2004; Frank & Ekman, 1997) and search for certain categories of facial signs that are clearly different from the visible indicators of a true emotion. Ekman (2009a, 2009b) argues that, by employing training and practice, it is possible to improve the ability of noticing signs that only appear to be the signs of a true emotion, although they are essentially different. Noticing the conflict between the experienced emotion and the tendency of an individual to stop its expression represents a precious experience for the observer as well. By observing the stopping, supressing, masking, and "leaking" of emotions, the observer learns about his/her own inner conflicts (Ekman, 2009a, 2009b).

Besides the aforementioned points, the following ones are also important: the observer's motivation to deal with the results of the conflict between the unwilling experience of emotion and the willing attempt to hide it, the observer's interest in facing the results of the imperfect hiding, the unsuccessful control of a bad simulation of emotion, and placing all that into a certain social context, free from the stereotypes about the recognisable behaviour of liars.

Social Intelligence and Deception

Social intelligence, according to the classic definition by Vernon (1933:44), is the "ability to get along with people in general, social technique or ease in society, knowledge of social matters, susceptibility to

stimuli from other members of a group, as well as insight into the temporary moods or underlying personality traits of strangers". Social intelligence facilitates positive behaviour and enhances relationships. The question that this chapter raises relates to the dark side of social intelligence; that is, what is the potential versatility that social intelligence gives to an individual to be deceitful and to control body language inclusive of facial features. Research by Sarzyńska et al. (2017) suggested that persons who were higher in cognitive ability, one dimension of intelligence, were better liars in both quality and effectiveness. Citing the work of Macfarlane, Allen, and Honzik (1954), they postulated a positive relationship between intelligence and deceptive frequency. Their research provides proxy support for the notion of people as socially adaptive beings who are able to negotiate, positively or negatively, for best outcomes, with social intelligence as a core determining factor of success. Trust, as an attribute of social intelligence (Yamagishi, 2001), assists in creating competencies for detecting lying. Carter and Mark Weber (2010) assessed this hypothetical relationship utilising Yamagishi's model. Yamagishi's model (2001: 275) suggests that "high trusters, who take more social risks and are, therefore, more vulnerable to exploitation, obtain more differentiating social data and learn more. In contrast, by defending themselves from possible exploitation, low trusters seem to be suspicious of everyone". The authors found that higher-trusting persons were better lie detectors. They attributed their findings to the relationship between trusting and social intelligence. The authors argued that the greater the trust seeking, the higher the social risk taking and the more intense is the drive to identify anomalies, that is, liars. Thus, high trusting builds an internal sensitivity as a protectivity to avert any detrimental consequence. Is it, therefore, that high trusting, and social intelligence, is associated with a greater sensitivity to access non-verbal cues including facial asymmetrical features?

Further, sensitivity to inconsistency between facial emotion and verbal content can also be appreciated in the context of social intelligence. For example, Wojciechowski, Stolarski, and Matthews (2014) assessed emotional intelligence in the detection of "emotional liars". Referring to Mayer and Salovey (1997), the authors identified important emotional competences associated with detection of emotional lying, including

perception, appraisal, and expression of emotion, emotional facilitation of thinking, understanding and analysing emotions, and employing emotional knowledge and reflective regulation of emotion. A fair question to ask is whether more highly emotionally intelligent persons are better at deception than are persons who are lower in emotional intelligence? Porter, ten Brinke, Baker, and Wallace (2011) found that persons higher in emotional intelligence were better able to control their expression of emotions and displayed and maintained more credible deceptive emotions for a longer period of time. However, they were not as efficient in their concealment of emotions as they felt.

As Porter et al. (2011) suggested, individual differences influence discriminatory assessments of truthfulness from falsehood. However, whereas their study found that high emotional intelligence can control emotional expressions that can lead to being deceptive, Baker, ten Brinke, and Porter (2012) found that high emotional intelligence can also result in vulnerability towards being deceived. Their research found that the level of emotionality experience by highly emotionally intelligent persons may have impaired evaluation and decision-making on deception. In fact, these participants were even more confident in their assessment of sincerity of the facial and emotional expressions of deceptive persons. The study suggested that inhibited decision-making may have resulted from increased empathy towards the deceptive pleaders.

Social and emotional intelligence in the identification of truthfulness and falsehood is a double-edged sword. On the one hand, high competencies in these intelligences lead to identification and possible intervention. However, on the other hand, vulnerability can emerge, which can inhibit or distort the discernment of truth from falsehood. Even a well-intended highly socially and emotionally person may be duped.

It is hard to imagine any social interaction, especially the ones we care about, which does not offer the possibility of exchanging true and false feelings, as well as their combinations. The constant change of different facial signs that we are trying to "catch" and understand or, on the other hand, ignore and push away, is encouraging us to test our abilities for deciphering or quitting such a task. Our skill sets to identify truth from falsehood, in facial appearance, allow us to intelligently interact and function adapting to our constantly changing social environment.

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