

## The importance non-verbal communication in diagnostic assessment in the traffic psychological exploration

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*Nicht weil die Dinge schwierig sind wagen wir sie nicht, sondern weil wir sie nicht wagen sind sie schwierig.* [It is not because things are difficult that we don't dare do them, but because we don't dare to do them that they are difficult] - Anon

*Die Natur erklären wir, das Seelenleben verstehen wir.* [We explain nature; we understand psychological life] - Dilthey

### Non-verbal communication

Psychology is the study of behavioural patterns, thoughts, ideas and also human emotional and physiological reactions. It includes the study of processes of human interaction and non-verbal communication (gestures, posture, movement, facial expressions, tone of voice). Non-verbal communication (body language) is an important part of interpersonal communication. It supports and supplements communication by opening up other channels and frameworks of communicating information. Non-verbal signals can emphasise, modify or even fully negate verbal statements. Extensive study of non-verbal behavioural patterns has confirmed that these are just as defined by rules and codes as verbal communication. Body language, like speech, is subject to a system that varies from society to society and must be learned by the members of that society in order to be able to communicate with others within that group (Secord & Backman, 1964).

Non-verbal signals have an important role in the structuring and control of human interactive processes (Forgas, 1985). They inform the participants of a conversation as to how their messages are received and thus allow for correction. In certain communicative situations, verbal communication is ritualised to the extent that it can no longer be used to gain an impression of the other person and their reactions. There are also situations where the communication partner wishes to verify the verbal messages with supplementary indirect (non-verbal) information. Non-verbal communication also plays a central role in the projection of a person's image because it transmits an impression of the person's personality (for example, clothing, choice of words).

Human body language can be divided into two categories: structural information (for example, facial features, body build, general appearance) and kinetic information (for example, facial expressions, gestures, bodily movements, posture). Facial expressions, for example, can indicate the type of the emotion (primary emotions). Bodily movements and posture, on the other hand, indicate the intensity of emotion and can physically illustrate what is said. A further form of non- or paraverbal communication is the tone of voice and also the manner of speaking.

In communication studies, the work of Mehrabian (1972) has shown that humans rely more on non-verbal than verbal communication when assessing social situations. Non-verbal mes-

sages give more information as to the relationship between participants of a conversation. In this manner, while mutual acceptance is expressed to 38% in tone of voice and 55% in facial expression, a mere 7% is expressed verbally.

Emotional expression and impression, although also influenced genetically, are inherently (ohne Ausnahme) subject to a culturally dependent socialisation process. Every society has developed norms that regulate the expression of emotion. The primary emotions are expressed in various different forms. Such culturally specific rules of expression are learned early in life and vary from culture to culture. (Ekman & Friesen, 1969). Some examples include the over- or understatement of emotion: the toning down or total suppression („poker-face“) or the expression of non-existent emotion („keep on smiling“). In learning these rules it is also necessary to be able to differentiate between „real“ and „acted“ expression of emotion. The ability to learn and implement the rules of verbal and non-verbal expression is as important as biological membership in a cultural group.

In comparison to spoken communication, body language is an effective indicator of the emotional state of the person in social interaction because the emotions present in a conversation are communicated non-verbally (Forgas, 1985). Non-verbal behavioural patterns are part of a complex process of communication in which both projector and interpreter of emotions influence each other. This mutual exchange of emotion occurs only over short spaces of time and the participants perceive the accompanying non-verbal signals on the most part instinctively. As in most cases, the verbal statements must be interpreted simultaneously, non-verbal communication is only partially consciously recognised or regulated. Non-verbal behavioural patterns are therefore not as consciously controlled and communicate attitudes, emotions or personal reactions in a less distorted manner than is the case in verbal communication. Certain behavioural patterns or even the credibility of verbal communication can in this way be recorded, assessed and be used for the diagnostic observation of communication patterns (Ekman, 1985).

Aside from typical methodological problems of diagnostic behavioural observation (Ellgring, 1996), there are also an additional series of problems that relate to the observation of non-verbal communication. According to Krause (1996), these especially pertain to:

- Classification of certain non-verbal signals as either culturally or genetically determined behavioural patterns (problem of ontology)
- Differing frequencies in the use of non-verbal expression of emotion and evaluation of this (problem of representation)
- Correct attribution of signals of emotion to a specific topic addressed in the interaction (problem of semantics)
- Dependence of the manner of expression on the specific interaction process and classification of a dyadic system of rules. (problem of context)
- The changing of interpretation parameters on account of emotional reaction of communication partner (problem of projection)
- cognitive control and simulation/dissimulation of expressive communication (problem of distortion/deception)

It is therefore clear that extensive further research is necessary to find convincing solutions to these methodological problems.

### **Qualitative Diagnostics**

The Cartesian scientific approach (measuring, explaining) belongs to the philosophical tradition of rationalism (*ratio* = reason), which extends back to Plato. Descartes, for example, differentiated between the observing subject (the scientist) and the object that is observed. In the reduction of the object of observation into measurable elements and in deducing the interaction of the elements according to general mathematical laws, the behaviour of nature and humans, like that of a machine, becomes calculable and predictable. These principles remain the basis of the natural sciences and technology today. They have also had a profound influence on the social sciences and psychology (Legewie & Ehlers, 1994).

The hermeneutic scientific approach (interpreting, understanding) is based on the tradition of understanding the world by the interpretation of signs. This tradition has a long history, and has been used since the Stone Age by hunters and shaman as a way of understanding the world. According to this world view, nature is a text, whose words and sentences can be read and interpreted by the observer on basis of his or her knowledge and experience. The meaning of the sign is not deduced according to mathematical laws, but according to the context in which it occurs. Interpretation is not based on the general, but is linked to the observing subject and relates directly to the context in which the phenomenon occurs (Legewie & Ehlers, 1994).

The comparison of Cartesian and hermeneutic scientific approaches shows that neither one nor the other method can be regarded as right or wrong. They are both simply represent different scientific view-points. When applied to psychodiagnosis it can be concluded that either measurement or interpretation can be seen as a possible basic method for diagnosis. Depending on the method chosen, a predominantly psychometric (quantitative) or predominantly interpretative (qualitative) method of diagnosis becomes evident. The choice of method is determined by the object of assessment or the relevant hypothesis to be examined. Non-verbal data can be processed by either the quantitative or qualitative method. In the diagnostic exploratory interview, the qualitative method must be chosen.

### **The traffic psychological exploration**

In the traffic psychological interview (exploration) of the medical-psychological assessment (MPU), communication occurs between two participants (assessor and client). Professional interactions, as in the case of diagnostic exploratory interviews, also represent a case of social interaction in which two people are subject to the processes of mutual social influence. According to Watzlawik et al. (1969), all communication includes an aspect of information and an aspect of relationship. In this way, during the exploration the assessor can, even in a highly formal context, bridge or even leave out the developing aspect of relationship between him or herself and the client.

The developing relationship between the assessor and the client during diagnostic interactive process has significant influence on the quality of the exploration. The assessor can enhance the quality of contact (*rapport*) by making the course of the conversation more flexible and catering it to the client's own communicative system and individual needs. This includes non-verbal techniques of directing the conversation (i.e. eye contact, nodding of the head, smiling etc.). In this manner the co-operation of the client can be enhanced and subsequently leads

to a more intense and open exploratory interview. It is important that the developing processes of verbal and non-verbal communication between the assessor and client do not affect the validity of the prognosis. (Meier-Faust, 2001; Undeutsch, 1983). Jäger & Petermann (1995) thus regard the quality of the exploration as especially dependent on the assessor's technical and personal skills. High competency in interaction, however, should not rely alone on the personality and experience of the assessor, but be regulated by guidelines for the conducting of the interview that are based on the results of latest research findings (Barthelmeß, 1990).

As a result of these different and overlapping verbal and non-verbal elements of communication in the process of the exploration, non-verbal, along with verbal data, must influence the assessors findings and prognosis. However, in the written MPU assessment reports, the non-verbal signals communicated by the client seem to play no role in the establishment of a diagnosis. Different parties (lawyers, for example) have criticised that the traffic psychological assessors in this way neglect an element that is regarded by many as an integral part of psychological analysis: the recording, interpretation and evaluation of body language. The purely verbal representation of the exploratory interview in the assessment report is not satisfactory and represents only a portion of the actual interaction between client and assessor.

According to Kunkel (1995), an assessment can only be regarded as objective if it meets the standards of the latest research findings. Recent extensive research into the diagnosis of non-verbal communication (Wallbott, 2001) should allow for these findings to be more strongly implemented in the assessments. One example would be to use it as a indicator of the client's willingness to co-operate, which is an important criterion for assessing the usability of the diagnostic data gathered in the exploration (Brenner-Hartmann, 2001). Another aspect that is certainly of special interest is „non-verbal leakage“, where the client non-verbally communicates information he or she would rather not reveal (Wallbott, 1998). This is based on the insight that attitudes and emotions are more effectively communicated non-verbally than verbally. Argyl (1975) was able to demonstrate that when verbal and non-verbal signals contradict each other, the non-verbal signals have four times more relevance for the assessor than verbal information. The overview for the diagnosis of credibility of the client put forward by Köhnken (1986) is the first step in the right direction, and was confirmed in further studies.

### **Non-verbal diagnosis**

According to Schulte (1994), behaviour in the stricter sense is the observable expressions and reactions of a person that are directly observed by a another person. These represent social stimuli to which others can react:

- Verbal expression
- physical expression
- method of expression

Behaviour in the wider sense is inner reactions, that, although not directly observable, are recognised by another person when they occur and can be directly reported on (when requested, for example):

- Physiological reactions

- Emotional reactions
- Thoughts
- Ideas

The diagnostic exploration offers

- verbal information: details of personal history, behaviour, emotions, ideas, attitudes
- non-verbal information (behavioural observation): non- or paraverbal behaviour, interaction between interviewer and client

This renders three different kinds of data:

- factual data („hard facts“)
- logical data (statements about intersubjective, directly accessible situations or conditions, for example, emotions, ideas)
- psychologically „soft“ data (areas which have not been tested in psychology, for example, values, attitudes, behavioural patterns, disposition etc.)

The observation of non-verbal behaviour as a diagnostic method for the gathering of quantitative data can be used in the following behaviour areas (Wallbott, 2001):

- facial expressions and eye contact
- gestures and body movements
- voice and method of expression

The methods to be used for observation and evaluation, however, require considerable technical support, which, however, is not available to the assessor during the exploratory interview. Behavioural observation is restricted to subjective impressions that have to be evaluated and qualitatively interpreted by the assessor at the end of the interview together with the verbal data from the client.

In two studies, Müller (1993; 1996) introduced a diagnostic process that attempts to empirically record non-verbal communication patterns in interactionary processes during first meetings in the form of an inventory of communicative characteristics. The inventory is made up of 50 para- and non-verbal forms of expression of which the frequency of occurrence is evaluated. It was shown that the communication processes could be recorded by the participating persons in a reliable and valid manner with the aid of the inventory. The aim of this diagnostic method was to non-verbally record and assess the communicative behaviour of the client and to ensure a specific style of communication was maintained during the interview with the aid of supplementary non-verbal data.

A large number of studies have demonstrated how certain assessments of a person are reached through non-verbal signals (Scherer and Wallbott, 1979). It has also been shown that even observers that have had no special training still can come to correct conclusions about another person's emotions, attitudes and taking on of roles (Ekman, 1985). On the other hand, it was also shown that „human lie detectors“ are not as reliable in the recognition of distortion as would perhaps be expected (Ekman & O`Sullivan, 1991).

Non-verbal behavioural elements can be more easier understood when they are decoded according to the relation of an element to its context. The isolated interpretation of an element as having one fixed meaning is therefore in most cases to be judged as speculative

because two or more different emotions can be mixed in every expression (Schefflen, 1964). In social situations, assessors do not focus their attention on one pattern of behaviour, but interpret their information according to the situation, in order to be able to reliably weight the behavioural pattern within a specific social context. Should a certain type of behaviour occur too often or too little for that specific situation, it will then more strongly influence the assessment of the situation. The assessor must therefore make use of rules or norms that allow for such an assessment. Should the verbal information offered by the client be irrelevant, questionable or even implausible, the assessor would direct attention to other sources of information like the non-verbal behaviour of the client in order to confirm the impression of the client's statements by use of this supplementary data

The interpretation of non-verbal emotional reaction as an indicator for a specific state can also be influenced by the probable tension or nervousness on the part of the client as the assessment situation has similarities with a test situation. This makes the recognition of certain non-verbal signals significantly more difficult. In such a situation the first aim should be to relax the client to allow him or her to return to their normal behavioural pattern (Dimitrius & Mazzarella, 1998).

Traffic psychological assessors report that in some explorations, they somehow do not believe the verbal information offered by the client on change in attitude and behaviour but have „no way to prove it“, and arrive at a positive prognosis only with „an uneasy feeling“. In the area of verbal communication, the assessor will have little chance for clarification as long as the client does not „let something slip“. In the area of non-verbal communication, however, the client's attempt to cover up information is not as controlled and important indicators could „filter through“. It must be differentiated between signals that indicate that something is being covered up or distorted (e.g. „nervous“ gestures or a certain kind of smile) and signals that give information as to exactly what is being covered up. In most cases such signals are so subtle that they can only be recorded with the help of technical equipment, or be registered intuitively by the assessor. Ekman (1985) and Wallbott (1998) offer an overview of signals that indicate distortion.

Behavioural observation during the exploration is part of the process of gaining an impression and has the aim of rendering subjective impressions objective and to reliably apply these diagnostically in the assessment. Information about non-verbal behavioural patterns is „soft“ data and must therefore be recorded and interpreted by the assessor in the diagnosis of the clients communicative behavioural patterns. In this process, a multitude of different signals must be detected and interpreted in connection with the verbal statements of the client. This takes longer and demands a high level of concentration on the part of the assessor, and also intuition and sound knowledge of human nature.

### **Intuition as a hermeneutic method of assessment**

Humans (including assessors) must be able to register a flood of information in a social situation, process this information and to come to a conclusion within a short period of time. This requires certain mechanisms for the reduction of complexity. Just as effective communication is not possible without the integration of „soft“ information, speculative judgements, which we call „intuitive“ also offer valuable data for the assessment process. Berne (1977) defines intuition as knowledge that is based on human experience and is gained through direct contact with the situation. The person intuitively assessing the situation cannot explain exactly how

he or she came to the conclusion or assessment. According to Berne, the concept of intuition can be traced back as far as Aristoteles, who regarded intuitive induction as the ability to register sensory perception and systematically categorise these.

The intuitive diagnosis reached by an assessor can also be accepted in administrative proceedings as long as the assessor has adequate experience, according to the opinion of a respected legal expert (H. Geiger, personal conversation 16.03.2002) As the level of research at present is not sufficient to offer objective insight (evidence, criteria), the assessor must be able to evaluate his or her own knowledge and experience concerning non-verbal communication in order to be able to offer a diagnostic assessment based on recognised guidelines. However, the use of such guidelines to reach the assessment must be made clear in the assessment report, in order it remains evident as to how the assessment was reached.

In professional communication processes, intuition helps to achieve reduction of complexity, integration and structure, but must be continually reviewed (Schmid, Hip & Caspari, 1999). Intuitive judgements are reached by comparing the situation to other situations already personally experienced. In the course of his or her professional career, an assessor is exposed to a multitude of information on human communication and behaviour. Depending on the assessor's experience and ability to compare the situation to others, intuitive decisions are a relatively reliable method of assessing the situation under examination. (Dimitrius & Mazzarella, 1998). The assessor therefore utilises his or her intuition as a hermeneutic method of assessment in the exploration. The intuitive assessment can be fine-tuned with training and experience, for example. These skills of assessment can be refreshed by identifying one's own methods and by, if applicable, questioning them. Schmid, Hip & Caspari (1999) recommend the following professional guidelines for working with intuition:

- A clear, individual professional identity
- Adequate time spent in a relaxed state in a familiar situation
- Intuition is more easily applied to persons one meets for the first time than persons one already knows
- The reliability of the intuitive assessments does not decrease when several aspects are considered simultaneously
- The quality of data gathered from intuitive impressions can be improved through training.

### **Non-verbal diagnostics in the traffic psychological exploration**

The aim of this article is not to introduce a diagnostic method that can be applied immediately or even to offer an evaluation of non-verbal diagnostics in the traffic psychological assessment. The aim is to examine the importance of non-verbal communication for the exploration and the diagnostic findings. At present there is a lack of research which would allow the adaptation of the present diagnostic technique to present research standards (Kunkel, 1995). At this stage this study can offer some practical suggestions for the diagnostic utilisation of body language and non-verbal data in the traffic psychological exploration, taking present limitations into consideration.

Guidelines for non-verbal behavioural observation and diagnosis in the exploration:

- Non-verbal data in the exploration can only be recognised and interpreted. The client's verbal statements, however, must also be qualitatively interpreted in the diagnostic assessment. Qualitative processes as the recording and interpretation of body language in the exploration demands adequate understanding of the object of observation. It is important to take the context of the assessment into consideration and also the client's own „communicative system of rules“
- The less the normal behavioural pattern of the client is disturbed by nervousness, the easier it is for the assessor to reliably recognise non-verbal signals. The client should therefore receive assistance to help he or she relax at the beginning of the exploration. The openness of the client is an important factor in the exploration and the prerequisite for this is his or her willingness to co-operate. All factors that encourage co-operation should be identified by both client and assessor at the beginning of the assessment, in order that both have the same idea of what this means. The co-operation and openness of the client in the rest of the exploratory interviews can be promoted by the conversational technique of the assessor and the ability to build up a personal relationship with the client - both at a verbal and non-verbal level. Documentation of this process (within the bounds of a system of quality control) is necessary
- It is recommended that the assessor describe and note down the first non-verbal impression of the client at the beginning of the exploration (first impressions). The assessor observes the client from the very first moment of the interview and intuitively comes to diagnostic conclusions. The client's appearance, the impressions and associations that the assessor arrives at spontaneously, the most prominent characteristics of the client. Which non-verbal signals are congruent with the assessment situation and which might contradict each other. Which signals are an expression of a temporary emotion and which reflect a general attitude.
- The behaviour of the client in diagnostic interaction with the assessor should also be examined. To what extent the non-verbal behaviour of the client indicates presence of emotion and the level of client co-operation and the extent to which this equates to the verbal statements. It is necessary to develop indicators that supplement the criteria for assessment (Brenner-Hartmann, 2001). It would be helpful to develop an inventory of communication characteristics and a method of recording these characteristics during the interview as an aid to assessment. The non-verbal reactions of the client in the exploration could be recorded by the assessor at intervals and be later considered in relation to the verbal statements of the client during the interview.
- Analysis of the exploration: Interpretation taking consideration of the social interaction between client and assessor and the emotional signals in connection with the verbal statements of the client. Which deviations from a certain behavioural pattern occur in connection with which subjects addressed in the interview. Which conclusions can be reached that are based on the non-verbal behaviour of the client and indicate which attitudes and to what extent can these conclusions stand up to accepted research practices and their validity as a prognosis. In the process of assessment the interpretation of data gathered depends on each individual case and is based on the experience and intuition of the assessor (casuistic assessment) (Petermann, 1996). The non-verbal information must be integrated into the assessment report. Textual formulae for the inclusion of non-verbal data in the written report need to be defined in order to allow for this development.



The diagnostic method of the traffic psychological exploration requires accepted criteria for assessment and guidelines for the classification and interpretation of non-verbal communication processes. The objectiveness of the diagnosis can be increased through the regulation of factors which would distort the assessment situation. The aim is to keep the reactions of the client as little affected by the assessment situation or by the assessor as possible. Objectivity can only be claimed when each individual exploration can prove that all criteria and guidelines have been adhered to. All relevant factors that could affect the gathering of information and the determination of a diagnosis should be documented.

The diagnostic reporting, interpretation and assessment of non-verbal data requires of the assessor a combination of psychological and analytical skills. The limits of this method lie - as is the case in every profession - in the individual skills of the assessor, but these can be enhanced with training and supervision. Many problems that are considered to play a critical role in assessment can be controlled or solved by implementing the results of new research findings (Stieglitz et al., 2001) and also by relevant methods of quality control (Laireiter, 2000).

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