

A HOLISTIC MODEL FOR THE EVALUATION OF THE TESTIMONY (HELPT)

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En este trabajo se presenta una propuesta de protocolo de evaluación de las declaraciones e identificaciones realizadas por posibles víctimas de delitos. El protocolo, denominado HELPT, se enmarca en un enfoque holístico de evaluación de la prueba testifical que considera todos los posibles factores de influencia: de codificación, de retención y de recuperación. Entre estos factores resultarán relevantes a) la capacidad para testificar de las víctimas, donde se tienen en cuenta los procesos cognitivos de atención, percepción, memoria y lenguaje; b) las características específicas del delito; c) los antecedentes del hecho evaluado y sus consecuencias; d) otros factores que pudieran afectar a la calidad y exactitud de las declaraciones e identificaciones, como el número de veces que la víctima tuvo que contar lo ocurrido, los métodos empleados para obtener el relato y posibilidades de sugestión. El método contempla procedimientos específicos de análisis exhaustivo de los expedientes y de formulación y contrastación de hipótesis (Scott y Manzanero, 2015), de evaluación de la competencia para testificar (Contreras, Silva y Manzanero, 2015) y de obtención de las declaraciones (González, Muñoz, Sotoca y Manzanero, 2013).

Palabras clave: Memoria de testigos, Psicología forense, Credibilidad, Abuso sexual infantil.

A proposed protocol for evaluating the statements and identifications made by the potential victims of crimes is presented in this paper. The protocol, called HELPT, is part of a holistic approach to evaluating the testimony that takes into account all of the possible factors of influence: encoding, retention and recovery. Among these factors, the following will be relevant: a) the ability of victims to testify, as well as cognitive processes of attention, perception, memory and language; b) the specific characteristics of the offence; c) the history of the event and its consequences; d) other factors that might affect the quality and accuracy of the statements and identifications, such as the number of times the victim had to tell what happened, the methods used to obtain the story and possibilities of suggestion. The method includes specific procedures for exhaustive analysis of the testimonies and for the formulation and testing of hypotheses (Scott & Manzanero, 2015), the evaluation of the competence to testify (Contreras, Silva, & Manzanero, 2015) and the obtaining of statements (González, Muñoz, Sotoca, & Manzanero, 2013).

Key words: Eyewitness testimony, Forensic psychology, Credibility, Child sexual abuse.

In the legal arena, especially in criminal jurisdiction, it is very important to test the objective or material truth of the facts that are being judged, demonstrating with *proof* (instruments or procedural activities that determine the formal or procedural truth) that the incident being judged is true (or false), such that the judge does not remain in any doubt about what happened (the facts), who exactly were the people involved, what each of them did, and the place and time in which they did it. The intention is that the procedural truth should be a reflection of the objective truth, and that the evidentiary procedures provide infallible results.

Therefore, during criminal investigations, all of the possible evidence –including the testimonies– is accumulated, which proceeds from the statements formulated by those involved (victims, witnesses and defendants) throughout the judicial process.

In some special cases however (such as many concerning child sexual abuse), the only way to get to the truth of the facts of the case is precisely through witness statements, due to a lack of any other means of evidence. In these cases the court is interested in determining the credibility of these statements, with the maximum possible reliability.

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¹ From *holism*: Any doctrine that a system may have properties over and above those of its parts and their organisation (Collins English Dictionary and Thesaurus)

THE HOLISTIC ASSESSMENT OF THE TESTIMONY

A few decades ago (Manzanero, 1991; Manzanero & Diges, 1993), it was proposed that, for the assessment of credibility in forensic contexts, it would be necessary to consider various aspects in a general or *holistic*¹ approach to the testimony, where three important aspects

were identified: a) behavioural aspects, b) physiological aspects, and c) verbal or content aspects.

This proposal was subsequently developed (Manzanero, 1996), concentrating on the evaluation of factors influencing the accuracy of the statements, rather than the presence or absence of the criteria of credibility. That is,

TABLE 1
HELPT PROCEDURE FOR THE ANALYSIS OF TESTIMONY
(STATEMENTS AND IDENTIFICATIONS)

A. Evaluation of the statements

1. Analysis of the factors of influence (evaluation of the file).
 - a. Event factors
 - b. Witness factors
 - c. System factors
2. Evaluation of the capability to testify and of previous knowledge.
3. Establishing the hypotheses
4. Obtaining the statement.
 - a. Preparing the interview.
 - b. Obtaining the information.
5. Analysis/evaluation of the statement.
 - a. Characteristics (how the account is given).
 - i. Comparative analysis with the characteristics of other statements of known origin.
 - ii. Justification for the characteristics found according to the influencing factors.
 - b. Contents (what is recounted), in relation to:
 - i. Evidence.
 - ii. The context of revealing.
 - iii. Motivation for informing (secondary benefit).
 - iv. Other information.
 - c. Falsifying and confirming the hypotheses.

B. Evaluation of the identifications.

1. Assessment of the capability to identify.
2. Analysis of the event and witness factors.
3. Obtaining the description.
 - a. Preparing the interview.
 - b. Obtaining the information.
 - c. Help in remembering.
4. Facial composite (if necessary).
5. Identification test.
 - a. Format.
 - b. Composition.
 - c. Mode of presentation.
 - d. Instructions.
6. Analysis/assessment of the identification.
 - a. Indicators of the accuracy of the identification under way.
 - i. Analysis of bias (influencing factors).
 - ii. Confidence.
 - iii. Type of response.
 - b. *A posteriori* indicators.
 - i. Real and effective size.
 - ii. Response bias.
 - iii. Discriminability and response criteria.
7. Assessing the validity of the identification.
 - a. Evidence.
 - b. Motivation for informing (secondary benefit).
 - c. Other information.
8. Possible causes of false identifications.

it recommends paying attention to the factors that explain the characteristics present in the statements made by the witnesses and victims of criminal acts. These factors may be grouped as follows: a) factors of encoding, b) factors of retrieval and retention. The need for a *holistic evaluation of the testimony* arises from investigations (Aamodt & Custer, 2006; Akehurst, Bull, Vrij, & Köhnken, 2004; Bekerian & Dennett, 1992; Bond & DePaulo, 2006; Mann, Vrij, 2006; Mann, Vrij & Bull, 2004; Manzanero, 2006, 2009; Manzanero & Digos, 1994; Manzanero, López & Aróztegui, 2015; Manzanero, Alemany, Recio, Vallet, & Aróztegui, 2015; Porter & Yuille, 1996; Sporer & Sharman, 2006, Vrij, 2005; Vrij, Akehurst, Soukara & Bull, 2004) that indicate that the mere analysis of the presence of what are known as credibility criteria is not sufficient to differentiate between statements that are true and those that are not.

Years later (Manzanero, 2001), a specific method of evaluation was proposed that, in addition to considering the influencing factors, included comparing the statement under analysis with another of known origin. More recently (Manzanero, 2010), practical work in forensic psychology and scientific research (Manzanero, 1994, 2000, 2004, 2006, 2008a, 2009; Manzanero & Digos, 1994; Manzanero, El-Astal & Aróztegui, 2009; Manzanero, López & Aróztegui, 2015; Manzanero & Muñoz, 2011; Manzanero, Alemany et al., 2015) would lead to a credibility analysis procedure in which not only were the above proposals and other proposed procedures (SRA, SVA, RM, etc.) taken into account, but also some guidelines were included for evaluating the test for identifying the perpetrator, which until then had not been contemplated.

The results of research in psychology of testimony (Manzanero, 2010) lead us to propose a *holistic model for evaluating the testimony (HELPT)*. The procedure presented here represents an improvement with regards to the previous proposals, since it also includes a model for evaluating the competency to testify, which would provide valuable information on the witness's influencing factors. The HELPT procedure would involve the following phases (Table 1).

Objective of the HELPT procedure

The main aim of the HELPT procedure is to obtain all of the possible information from the witnesses and victims of the crime, with minimal interference, and to assess their credibility.



This is not to establish a ruling on a particular case, but to facilitate the necessary scientific information so that the investigators, judges and courts can make the best decisions regarding the credibility of the statements of those involved in criminal acts.

In any judicial process there will be different parties and most often the descriptions of the events that the witnesses, victims and defendants make do not match. Thus, one of the oldest concerns of justice is the discovery of "the truth". The first problem is that there is often some confusion between truth and credibility. From a scientific perspective and contrary to common beliefs, the "truth" does not exist; it is an individual and social construction. Thus, in an investigation (scientific and/or criminal) we can find many truths, even ones that oppose each other. There are as many truths as there are perspectives that we can adopt. This is especially true when we refer to the statements of victims, external witnesses or defendants. From this sceptical stance it follows that little can be established with regards to the "truth" and by extension with regards to the "lie". On the other hand, the lie also implies a moral judgment. That is, a person lies when he² deliberately conveys information that he consciously knows does not conform to the "reality" of the facts. With regards to lies, we can only speculate about the possible motivations of the witness for hiding or distorting what has happened, because we can hardly claim that a witness is lying unless the witness herself admits to it. This is even the case when there is evidence to contradict her statements. The characteristics of our cognitive system cause most of the inaccuracies that we find in the witness statements to be due more to mistakes than to deception. Witnesses can make mistakes and be absolutely convinced that certain things happened that never actually took place.

Credibility can be defined as *the subjective evaluation of the estimated accuracy of the statements of a witness* (Manzanero & Diges, 1993). This evaluation is based on inferences that consider different aspects, such as the circumstances and characteristics of the witness and of the crime, our knowledge and beliefs, and the estimated congruence between the statements and other evidence – other statements or related indicia – (for a review see Manzanero, 2010). Since the evaluation of credibility is always an inference (an estimation), it is always

subjective. Simply by comparing the statements with a video recording of the events, we can objectively evaluate the reality of these statements. But then we would not be talking about credibility, but accuracy.

In short, when we talk about lying, we are referring to the intention of the declarant. Credibility not only covers lies, but also the lack of accuracy generated by other different sources, such as distortion of the memory.

Different techniques have been proposed for the analysis of credibility based on the content of the statements (for a review of these techniques see Manzanero, 2010). These proposals lead us to focus not only on the respondent and his characteristics but also –and above all– on what he says. Thus, the analysis of the content of the statement itself could be the alternative to assessing who makes the statement and how he says it. These methods of analysis arise from the initial proposals of Arntzen (1970) and Trankell (1972) from forensic practice in cases of sexual assaults on children, leading them to suggest that true statements would be characterised by the presence of greater detail, the appearance of superfluous details and emotional information, whereas false statements would contain opportunistic details to benefit the person making the statement, the stories would be excessively consistent and they would contain fewer subjective details such as thoughts, feelings, etc. Subsequently, other methods have been proposed for analysing the credibility of the witness statements and, as well as suggesting a list of criteria according to which it would be possible to assess the credibility of statements, they also propose a specific methodology whose main objective is to reduce the subjectivity of the simple confirming of the presence of discriminative features. The best known techniques are those of the reliability of the evidence (Trankell, 1972), the statement reality (Undeutsch, 1989), and the statement validity (Steller & Köhnken, 1989).

During the nineties these techniques have been used in forensic contexts, exclusively for cases of minors who are the alleged victims of sexual assault. Since then, many of us have not just applied these techniques but we have also tried to understand in greater detail their validity and the theoretical assumptions that support them (for a review see Manzanero, 2010; Manzanero & Gonzalez, 2013). The results of the studies that have been carried out on these issues have led us, several decades later, to draw

² *Translator's note:* From here onwards in the text, male and female pronouns will be used alternatively to avoid the use of 'he/she' and 'his/her'.



conclusions that are critically against certain uses and methods of content analysis. For this reason, today, we must say that unfortunately, these methods are not useful for assessing the accuracy of a specific account, but only for distinguishing groups of false accounts from groups of real accounts (Köhnken, Manzanero & Scott, 2015). The problem lies in the inability to assess appropriately the complexity and multidimensionality of the accounts and witnesses, which could lead to erroneous conclusions. In the same vein, Köhnken (1989) recommended the consideration of a set of issues that could affect the differences between real and false statements: the statement length (short vs. long), the verifiability of the content (verifiable vs. unverifiable), other available evidence, the complexity of the event described (complex vs. simple), the amount of schematic knowledge of the witness regarding the act in question, the duration of the event (short/one-off vs. long/repeated), the emotionality of the fact described (emotional vs. neutral), the possible type of lie (concealment, exaggeration, creation of new details), the direction of the statement (guilt vs. exoneration), the scope of possible deceptions (simple details vs. entire statement), personal involvement (uninvolved witness vs. participant or victim), and the sequence of statements (first account vs. repeated accounts). A recent study (Manzanero, López & Aróztegui, 2015) showed that the probability of accuracy in the classification of real and false accounts is increased to the extent that they consider the complex patterns of interaction among all of the possible characteristics of the memories. The complexity of the nature of memories is shown, for example, in the role of emotions in the memory. Most authors propose emotionality as a characteristic factor of true statements (Trankell, 1972; Köhnken, 1989; Undeutsch, 1989; etc.), while research on aspects of memory have shown that the appearance of emotional information in memories depends, among other things, on the perspective of retrieval, which in turn is affected by variables such as the delay, the type of event or the retrieval instructions (Nigro & Neisser, 1983; Manzanero, 2000).

However, in all probability, the main limitation to the credibility analysis techniques comes, first and foremost, from the method of application and the expertise (knowledge and experience) of the professional who uses the techniques. The misuse of these techniques could lead to inappropriate conclusions. The second limitation comes from the validity of the technique used.

In short, we can say that the content criteria in themselves do not seem to be as useful as we hoped in discriminating between real and false accounts. In this respect, we would agree with Sporer (1997) who noted that the alleged differences between real and false statements are a mere working hypothesis about which we cannot specify why they occur, what are the underlying psychological processes, or the conditions that cause them to or appear -or not to appear- in a statement. Regarding the use of content criteria as the only element in deciding on the credibility of a statement of a child alleged to have been the victim of sexual assault, we agree with Vrij (2005) when he states that the analysis of credibility based on the content of the statements is not accurate enough to be admitted as evidence in criminal cases, although it may be useful in police investigations. These techniques of credibility do not meet two of the Daubert standards (Daubert vs. Merrell Dow Pharmaceuticals, 1993) for the admission of evidence in forensic contexts: the error rate is higher than the tolerable level and the techniques have not been widely accepted by the scientific community. Numerous researchers in psychology of testimony, from different universities and research centres in different countries have expressed serious doubts about content analysis as a method for evaluating the credibility of testimony (Brigham, 1999; Davies, 2001; Lamb, Sternberg, Esplin, Hershkowitz, Orbach & Hovav, 1997; Manzanero, 2004; 2009; Rassin, 1999; Ruby & Brigham, 1998; Sporer, 1997; Vrij, 2005; Wells & Loftus, 1991). What initially was hope regarding the contribution that the initial proposals seemed to contribute to the search for the "truth" in this field (Manzanero, 1996, 2001) has turned into frustration because of its limitations and the way the techniques are being misused.

ASSESSING THE STATEMENT

Evaluating the influencing factors (evaluating the judicial file)

The first step in evaluating the testimony is to collect all of the available information regarding the specific case. In general, for this purpose it is useful to carry out a systematic analysis of all of the steps that have been taken so far, in order to obtain the relevant information regarding the acts and the people that committed them, the history and their consequences (for a proposed protocol for the analysis of judicial files see Scott & Manzanero, 2015). With this information, the initial



hypotheses of the case can be produced, the testing of which will be the main objective of the intervention from this point onwards.

Evaluation capability and analysis of influencing factors

After gathering all of the relevant information regarding the case, one of the obligatory tasks for a holistic assessment of the testimony is to evaluate the capability of witnesses to testify (for a proposed assessment protocol see Contreras, Silva & Manzanero, 2015) prior to interviewing them about the facts under investigation. The aim is not to rule out the "incapable" witnesses but: a) to adapt the interview procedures to their abilities, in an attempt to obtain the maximum amount and the best quality (accuracy) of information possible and b) to be able to explain adequately the characteristics of their accounts. This assessment must be carried out at all times when any deficit is suspected that could interfere with the ability to testify and when the testimony is essential to the prosecution of the acts. Therefore we must routinely evaluate the capability to testify of child witnesses (the lower age, the greater the emphasis), of the very elderly, and of those who may have learning deficits, intellectual disability or any type of mental disorder. These are known as vulnerable witnesses or victims.

By capability to testify we mean the abilities of the individuals to perceive, remember and express with rigour the events that they now have to report (Contreras et al., 2015). The majority of people involved in judicial investigations have sufficient competence to testify, but when a vulnerability appears it is important to take a moment to assess whether our witness has realised what really happened. To what extent has she understood it? Has she paid enough attention to all of the details, or more to some and less to others? How is his spatial and temporal awareness? Does he distinguish between places, times, amounts? Does she distinguish fantasy from reality? Can he remember? Can he adequately communicate what he remembers? The police who are investigating the facts, the judge who is conducting the investigation and, above all, the court who will make the judgement all want to know what happened (in great detail), when (with much precision), where, with what, who was involved, what each person did or said exactly, etc. Therefore, before asking the witness or victim all of these things, it is necessary to be sure that she is able to meet these demands and, if any kind of deficit is observed, it is

important to determine whether the interviewers can do anything to help the witness to overcome it.

Naturally, those who will report first-hand whether there is any vulnerability or not are the people who take care of such witnesses, so it is necessary to spend a few minutes talking with them about specifically what kind of "disability" they are to meet. For example, in the case of very young children that are victims of sexual abuse, before talking with the children, it is useful to talk for a few minutes with their parents or carers, and even their teachers, asking them indirectly about the abilities of the children, in a conversation that is usually informal, which will serve to collect the witness factors (which can then be analysed). Also, these meetings can be used to collect data (also indirectly) regarding the circumstances surrounding the incident, in order to begin to evaluate the event factors.

Once contact has been made with the vulnerable witness, it is time to check the true extent of their capabilities and vulnerabilities. This evaluation, which is in no way meant to be a forensic psychological assessment, helps prepare the conversation that is then going to take place regarding the facts under investigation, anticipating which questions will be impossible for the child to answer. For example, if he has not acquired the ability to quantify, it is useless to ask how many times the defendant has abused him, and this information should be obtained by another means. As well as serving to evaluate capabilities, the moral judgment of the witness must also be appraised, noting whether she is aware of the consequences of the acts and her position regarding the truth and lies.

If instead of very young children, one is dealing with people with intellectual disabilities, capability assessment procedures can be used such as those proposed in the manual *Intervención con víctimas con discapacidad intelectual [Intervention with victims with intellectual disability]* (Manzanero, Recio, Alemany & Cendra, 2013): Cuestionario de Evaluación de Capacidades para Testificar de Víctimas con Discapacidad Intelectual [Questionnaire for Assessing the Capability to Testify of Victims with Intellectual Disability]. This questionnaire is intended to be filled out by the people who best know the witness with intellectual disabilities –the relatives and/or carers; and as in the previous case, the answers collected will serve to prepare the police or forensic interview well and to seek any support that may be needed. However, it is also recommended to interview key people who know



the witness with intellectual disabilities, especially those to whom the incident was reported or those to whom it was first revealed.

Obtaining the statements

If the actions mentioned above are followed, the first two steps of HELPT will have been taken, collecting the data to evaluate the witness competency and analysing the event and witness factors. Next it is time to continue with the proceedings, obtaining the best possible statement from the defendant. It is not possible to summarise in a few paragraphs all of the topics that are recommended, within the psychology of testimony, for implementation in an interview with vulnerable people such as very young children, so the interested reader should consult the work of the specialists (Echeburúa & Subijana, 2008; González, 2015; González, Muñoz, Sotoca & Manzanero, 2013; Manzanero, 2010) to learn how to prepare the interview well and the environment in which to do so (the most favourable possible); to understand how to handle the adults accompanying them; to decide why the adults should not attend the interview (children may experience a sense of shame that could be harmful; one parent, or both, may have participated in the events, etc.); and, finally, to conduct an interview with communicative elements that fit the capabilities and motivations of children of according to their age. Some authors have published specific interviewing guidelines, one of the best known being the NICHD (National Institute of Child Health and Human Development) protocol. In a recent study (Lamb, Orbach, Hershkowitz, Esplin, & Horowitz, 2007), the authors described the benefits of this protocol, having tested it extensively in real cases, concluding that very good results were achieved when using it.

There is also international scientific literature on the subject of people with intellectual disabilities (Milne & Bull, 2006) with good recommendations on how to proceed with regards to the interviewing. Interviewers must be encouraged to assume the responsibility to understand the problem of intellectual disability well, in order to provide better service to citizens with this difficulty, especially when they are involved in the investigation of crimes. It is important to understand the types of support that are available, which, if used, would serve a dual purpose: to guarantee the rights of these people, while also enabling the investigators to relate to them more effectively. We have already

mentioned that in Spain a guide has recently been published for police intervention with people with intellectual disabilities (Alemany et al., 2012), which provides a definition of intellectual disability, to help investigators to identify people with this disability correctly and quickly, so that they can provide the necessary support from the earliest possible moment. The definition is completed with observations on the main myths and misconceptions about these people that are widespread among the general public, in order for the researchers to take these into account so that they do not bias or interfere in their work. Also included is a reminder of the rights of people with intellectual disabilities, contained in the UN Convention, as there will have to be procedural adjustments, both at police and judicial level, which have not yet been made. Additionally, this guide outlines the interviewing techniques that, in the light of current scientific knowledge, allow us to establish an appropriate relationship with people with intellectual disabilities (according to each type of disability), to facilitate the communication between the interviewer and the interviewee, and thus to obtain the most extensive and accurate testimony possible, aiming to guarantee the testimony as much as possible, as well as satisfying all of the rights of these people. Thus, the recommendations or best practices are determined based on the different moments of the intervention: from the moment it is known that these people may have been involved in criminal incidents, through the pre-interview preparation, the beginning of the interview itself, its course (exploring the events under investigation) and the completion of the encounter, so that it is as stress-free and worthwhile as possible, given the already difficult circumstances in which this dialogue takes place due to the vulnerabilities of the interviewee and the subject matter of the investigation.

Analysis / evaluation of the statement

Once all of the possible information has been obtained from the witnesses and victims of a crime, with minimal interference, and ensuring they are recorded faithfully (by video-recording), it is time to evaluate their credibility. This is not to establish a ruling on a particular case, but to facilitate the necessary scientific information for the investigators, judges and courts to make the best decisions regarding the credibility of the declarations of the people involved in the events.



To this end, we must take into account all of the possible hypotheses that must be tested in the specific case under investigation (Köhnken et al., 2015).

If a mistake has been made, the only possible intervention will be to conduct a thorough analysis of the influencing factors (of the witness, the event and the system), for which the analysis of the files mentioned above will have been useful. If the hypothesis is that it could be a lie, then protocols such as SVA could be useful (Köhnken & Steller, 1988; Steller & Köhnken, 1989).

A review of the procedures for the assessment of credibility (Köhnken, Manzanero & Scott, 2015; Manzanero, 1996, 2010) allows us to propose an integrated procedure that synthesises of all of these procedures, for analysing the lie hypothesis, and takes into consideration the best aspects of each procedure. Thus, the methodology described by Trankell (1972), consisting of a rational analysis based on the formulation and falsification of hypotheses, seems to be the best. One of the biases that causes the emergence of false allegations of sexual abuse is what is known as confirmation bias (experimenter bias in experimental psychology); that is, when trying to confirm a hypothesis one tends to evaluate more positively the criteria that would confirm it, whilst the criteria that would disprove it go unnoticed. As can be observed, references are continually being made to the terms and procedures from experimental psychology, since this is the procedure that is used to assess the credibility of a statement (Undeutsch, 1989). Following the method of falsification (Popper, 1959), the criteria should be analysed as well as how they should appear if the statements do not come from an incident that has been experienced, but one that has been imagined or suggested (Scott & Manzanero, 2015).

In this way we can distinguish two phases in the evaluation: first, the analysis of criteria and, second, the falsification of hypotheses. Moreover it is recommended that the evaluation is conducted by two expert psychologists. Two psychologists are recommended because, as in the case of courts or juries in comparison with a single judge, the process of deliberation and the agreement to be reached involve a deeper level of analysis. Two heads are better than one, and what one may not think of might occur to the other. Both of the psychologists must be present during all of the phases of the analysis. In the analysis phase of the interview with the child, which will preferably have been video-recorded, it is recommended that the psychologists first try to analyse

it independently and then put their findings together and reach an inter-rater agreement.

Moreover, as Trankell suggests, it is extremely useful and convenient for the evaluation of the criteria to ask the child for a description of an event that you know for certain has happened and that can be evaluated in parallel with the description of the sexual assault, which enables the comparison of how the criteria appear in each memory description. The most appropriate event is usually a medical examination about which the child's relatives can provide details. Steller, Wellershaus and Wolf (1988) found that the characteristics of medical examinations could be comparable to those of sexual assault, and in fact, a large number of experimental studies (e.g., Bruck, Ceci, Francouer & Renick, 1995; Goodman & Quas, 1997; Ornstein et al., 1997; Saywitz, Goodman, Nicholas, & Moan, 1991; Stein, Ornstein, Tversky & Brainerd, 1997) on the accuracy of children's memory regarding sexual assault used medical events. However, in some cases, the validity of these generalisations has been questioned (see for example the interesting discussion that appears in Doris, 1991, between Goodman & Clarke-Stewart; Steller, Brigham, McGough, Yuille & Wells; Loftus & Ceci; and Bull).

The procedure suggested by Undeutsch on the evaluation of sequences of statements is also of interest. In most cases of sexual abuse, the child has had to describe the event several times, so it is possible that some of these descriptions will be available. However, when considering the analysis of the consistency between each of the statements it should be borne in mind that inconsistencies are to be expected. Otherwise, they could be considered a symptom of low credibility. Experimental studies have shown that young children may present significant inconsistencies in their different statements. For example, in a study with three-year-old children, Fivush (1993) found that only 10% of what is recalled in the first interview reappeared in the second, which indicates a significant lack of consistency between the two interviews. According to Warren, Hulse-Trotter and Tubbs (1991) inconsistencies increase in children more than in adults with multiple retrieval. Moreover errors can be maintained from one statement to another, as Tucker, Mertin and Luszcz (1990) found in a study that showed that 67% of errors of commission in the first recall were repeated in the second recall, or Brainerd, Reyna and Brandse (1995) who, in an experiment with children aged between 5 and 8 years old, obtained data showing that



false memories were more stable than real memories throughout different intervals in recognition tasks.

With regards to the criteria, we recommend using those described by Steller and Köhnken (1989), which are more systematic than those of Arntzen (1970), Undeutsch (1989) and Trankell (1972), and we also recommend the SVA interview method of evaluating the validity. The difference with respect to the initial proposal by Steller and Köhnken is in the application of the procedure. While the original proposal involved checking whether the criteria were present or not, on the assumption that their presence would indicate credibility, with HELPT we propose examining the criteria that would no longer relate to credibility, but rather to observation, and trying to explain their presence or absence through the available elements: a) theories on the functioning of the cognitive processes involved in the capability to testify (attention, perception, memory, language, meta-cognitive processes, etc.), b) scientific evidence on the effects that different variables may have on the accuracy of the statements, for which it will be necessary first to establish a list of all of the relevant factors in the case being assessed, and c) comparison with other accounts of known origin (e.g., with the account of the medical-forensic examination of the victim).

EVALUATION OF THE IDENTIFICATION

Capability to identify and analysis of influencing factors

To evaluate the accuracy of the identifications of the witnesses and victims of a crime, one of the aspects that we must inevitably evaluate is their general capability to identify.

Two issues are crucial in this regard:

- a) The opportunities that the witness has had to observe the aggressor
- b) The witness’s cognitive skills of identification

With respect to the first issue, it is important to analyse

the influencing factors on the ability to identify (for example those indicated by Wells, 1978; Wells & Olson, 2003; or the adaptation by Manzanero, 2010), where the factors to be estimated are contemplated (witness and event factors) as well as the system factors (see Table 2). Specifically, the following must be taken into account: the duration of the event, the opportunity to observe the assailant's face, possible disguises or elements that distort the facial appearance, perceptual and attentional issues, etc. As with the statements, when evaluating the identifications we should also make a list of all of the relevant factors that could affect the accuracy. The scientific evidence regarding the weight of these influences and considerations on theories about the cognitive processes involved in identifying people should be the main criteria for explaining the performance of the witnesses in these proceedings.

On the second issue, we must take into consideration the witness’s attention span and memory, possible perceptual deficits, pathologies related to the processing of facial information, motivational and emotional factors, etc.

Obtaining the description and preparing the portraits

In all cases, the witness should be asked for a description of the person to be identified, but as discussed above, these generally tend to be rather broad and not useful for finding the perpetrators. However, the description is essential in producing the line-ups, and it has the additional usefulness of enabling the elimination of all persons whose characteristics clearly do not conform to the description provided.

To facilitate the obtaining of the description, the procedures recommended for obtaining statements could be used, since both cases involve memory tests. Sometimes a portrait may also be made of the wanted person, although the usefulness of this is very limited and

TABLE 2
PRINCIPAL VARIABLES THAT CAN AFFECT ACCURACY IN THE IDENTIFICATION ON THE PART OF THE WITNESSES

Variables to be estimated		Variables of the system	
Event	Witnesses	Process	Line-up
<ul style="list-style-type: none"> ✓ Perceptual conditions ✓ Duration ✓ Familiarity ✓ Impactful details ✓ Number of assailants ✓ Violence ✓ Focus on the weapon 	<ul style="list-style-type: none"> ✓ Gender ✓ Age ✓ Race ✓ Training/experience ✓ Expectations and beliefs ✓ Anxiety ✓ Role of the witness 	<ul style="list-style-type: none"> ✓ Effects of delay ✓ Post-event information ✓ Photographs ✓ Previous descriptions ✓ Facial composite 	<ul style="list-style-type: none"> ✓ Composition ✓ Number of members ✓ Selection of foils ✓ Mode of presentation ✓ Instructions



it generally has negative effects on subsequent recognitions.

Identification Test

The final step would be to carry out the identification test in any of the possible formats (photograph, video or live). The key to a correct identification test will be in the composition of the line-up or the choice of photographs or videos, the mode of presentation and the type of instructions. In any case the rules for directing and interpreting recognition tests can be borne in mind (Manzanero, 2008a, 2010).

Expert analysis of line-ups

Once the identifications have been obtained, the next step is to evaluate them. The evaluation of the identifications is one of the most important problems of the judicial system, because as with the statements, intuitive judgments do not seem very apt for carrying out this task with guarantees. For this reason, Yarmey and Jones (1983) recommend that in order to solve this, it will be essential to have the advice of the experts who, on the one hand, understand the relationships between variables and empirical accuracy and the correct functioning of memory, and on the other, have more accurate evaluation mechanisms.

The first proposal would involve the analysis of the influencing factors. In addition, subsequent evaluations may be performed *a posteriori* on the correct composition of the line-ups. These analyses consist in evaluating the bias of the line-ups by calculating the size of the line-up and the biases in its composition using mock witnesses.

In any case, the best thing we can do to evaluate the accuracy of an identification is to base our evaluation on the kind of response that the witness gives when carrying out the identification and on all of the information we have about the case: the circumstances in which the event occurred, the characteristics of the witness, and in general, all of the factors that could affect the memory and recognition of the perpetrator of the acts.

Line-up biases

To assess whether there is any bias in favour or against the accused due to her physical characteristics in relation to the other members of the line-up, two indices have been proposed:

✓ Bias index of the accused by Doob and Kirshenbaum (1973). This involves finding the difference between the

probability of indicating the suspect by chance and the actual frequency with which he is indicated by the mock witnesses ($1/N-d/n$). Bias against the suspect occurs when there is a statistically significant negative difference, whereas it is in favour of the subject when the difference is positive.

✓ Bias index of the accused by Malpass (1981). The difference with the previous index is in the size of the line-up, which is taken into account to estimate the probability of indicating the suspect by chance. In the first index, all of the members are considered, regardless of the frequency with which each one is indicated, i.e., regardless of whether they are good foils or not. Here the size of the line-up in the ratio $1/N$ is the effective size.

The problem with these indexes may be due to the complexity of applying them. Therefore, Malpass and Devine (1983) recommend using the nearest measures to the direct data, which are easier to understand and less likely to produce value judgments. These measures are derived from the distance between the expected frequency due to chance and the frequency with which a certain member of the line-up is indicated by mock witnesses. A simple and understandable way of signalling this difference is to translate it into percentages, so that we have for each member a score indicating how far away it is from that expected by chance if the line-up is impartial. Then all that is needed is to adopt a fixed criterion for deciding whether a foil is adequate.

Signal Detection Theory

In any case, one could also use the methodology of experimental psychology based on signal detection theory (Tanner & Swets, 1954; Green & Swets, 1966/1974) to assess the composition of the line-ups. According to signal detection theory, we can use two measures to evaluate the subjects' responses in a recognition test: discriminability and response bias. Discriminability (d' , or rather the nonparametric A' measure, since the criteria of parameter application will not be met) (Snodgrass, Levy-Berger & Hayden, 1985) is defined as the index which evaluates the difference between the distribution of the signal (in this case the suspect) and the distribution of the noise (here the foils). The discriminability depends on the conditions of the test. Using mock witnesses we should find that for people who have not witnessed the event, there is no difference between the suspect and the other members of the line-up.



Response bias (B'' non-parametric measure of β and c) (Donaldson, 1992) indicates the type of criterion used by the particular witness, which is influenced by witness and event factors, as well as the instructions we give him when he faces the line-up. Response bias indicates whether a witness tends towards conservative criteria, and therefore tends not to point the finger; or liberal response criteria, and therefore tends to select a person. To evaluate this index we should use target absent line-ups.

It should be possible to evaluate the first index at any time, if there is a photograph or video of the line-up. The second index should be performed under the same conditions in which the line-up with the suspect was carried out, which makes it much more difficult to apply. Both of these indices constitute another indicator for assessing and understanding the performance of witnesses.

Influencing factors

As mentioned, to evaluate the credibility of the identifications, first, all of the circumstances surrounding the event must be considered: *witness factors* (in the case of minors the following must be taken into account: age, race, anxiety, involvement, expectations and prior beliefs), *event factors* (perceptual and attentional conditions, duration, familiarity, impactful details, number of assailants, violence and focus on the weapon), and *process factors* (delay in the identification, post-event information, photographs, previous descriptions) and the *line-up factors* (composition, number and characteristics of the members, mode of presentation and instructions).

Afterwards, some of the indicators of accuracy could be considered (Manzanero, 2010; Manzanero, López & Contreras, 2011): type of response, reaction time, etc. The problem here is that there has not yet been enough specific research carried out on the validity and reliability of these indicators in minors. Therefore, the identification, essential when speaking of unfamiliar aggressors, should preferably be established by evidence or objective proof. It is not recommended from within the psychology of testimony to establish the responsibility for the acts solely by the subjective identifications performed by witnesses.

If the aggressors are familiar (people whom the victim knows well), it is not necessary to conduct a recognition test. In this case, the problem could be to establish who performed certain actions, if several people were present at the scene of the events. Until the age of six, children may have difficulty in distinguishing between what a

person did, what the child imagined the person did, and what the other people that were present did.

LIMITATIONS IN THE APPLICATION OF THE CREDIBILITY ANALYSIS

When applying any of the methods of analysis of the credibility of the statements, we can come across a number of difficulties that hinder or even prevent it. Some of the major difficulties have to do with obtaining the declaration, the previous procedures and the witness capability.

With regard to obtaining the statements, it is vital that the witness describes the events without any coercion and using their own language. If the witness does not cooperate in the interview and provides little information on the facts, the analysis may be impossible. We must remember that the analysis is carried out mainly based on the free account and not exclusively on the answers to the questions asked during the interview, which could bias the witness's statement.

The prior procedures could also be a major obstacle. The main difficulties stem from the number of times that the witness has described the event and the time elapsed since the incident occurred. When there have been large time intervals or minors who have been asked about the event many times, their testimonies are likely to be contaminated by external interventions (post-event information), and their interpretation of what happened may even change radically. Similarly it must be assessed whether the witness/victim is being treated by a psychotherapist, in which case the therapy may involve having to relate and even reinterpret what happened.

The witness's ability to express himself and describe the facts also conditions the application of these procedures of analysis. Very young children with low capabilities in expressing themselves and understanding the instructions given during the interview may not provide sufficient data for the assessment of the credibility of their statements.

In general, for a correct assessment of the credibility, it is necessary to consider all of the existing factors in the specific case that could skew the application of the different analysis criteria. The assessment of credibility, using techniques of content analysis of the statements, must consider many factors and cannot be limited only to the isolated analysis of the characteristics of the witnesses' accounts (Arce & Fariña, 2005; Manzanero, 2001, Steller & Köhnken 1989; Undeutsch, 1989; Vrij, Akenhurst, Soukara & Bull, 2004; Yuille, 1989). For example, Arce and Fariña (2005) proposed using a



Sistema de Evaluación Global [comprehensive assessment system] as a method of assessing credibility that takes into consideration the statements (memory trace) and their consistency over time and throughout the judicial process, the content analysis of the statements regarding the facts (validity and reliability of the statement, by evaluating the inter- and intra-measure, inter-rater and inter-context consistency), the measure of clinical effects of the traumatic event (psychological trace), the statements of the individuals involved, and the analysis of the personality and the capabilities of those involved.

Perhaps the main limitation of the credibility analysis techniques comes, first and foremost, from the method of application and the expertise (knowledge and experience) of the professional that is applying them. As we have seen so far, there are numerous techniques with the same purpose, all of them quite complex. The misuse of these techniques could lead to inappropriate conclusions.

The second limitation comes from the validity of the technique used. All of the procedures described here are based on the assumption that true statements differ from false statements (imagined, suggested, etc.) in a number of ways. The content criteria are based on this assumption. However, this assumption is not entirely correct. The features that supposedly characterise a memory according to its origin are not consistent and they are influenced by multiple factors. Most of the research (Manzanero, 2009, 2004; Porter & Yuille, 1996, Sporer & Sharman, 2006; Vrij, Akehurst, Soukara & Bull, 2004) that has analysed the characteristics of memories, comparing real and false accounts, shows that not all of the characteristics differ depending on the type of memory. Sometimes there have even been more features of reality found in false accounts than in true ones.

Finally, it should be made clear that the implementation of these procedures requires extensive knowledge of the workings of the memory, both from the perspective of cognitive psychology and regarding the factors that affect the memory of witnesses. Experimental work in the area is also necessary, because knowledge of experimental methodology will allow us both to analyse the research data on the subject and to master the formulation and falsification of the hypotheses, the experimental methodology used in this technique. Otherwise, attempting to apply the criteria as if they were rules, without taking into account the circumstances of the specific case under examination, will increase the subjectivity of the evaluation.

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