ANALYSIS OF THE JUDICIAL FILE:
ASSESSING THE VALIDITY OF TESTIMONY

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En el marco del enfoque holístico para la evaluación de la prueba testifical (HELPT), el presente trabajo describe un protocolo para el análisis de toda aquella información susceptible de ser extraída de un expediente judicial, a la luz de los conocimientos del procesamiento heurístico de la información, y del análisis de los factores de influencia de las declaraciones desde la Psicología del Testimonio. El objetivo es brindar una sistematización de los tópicos que pudieran explorarse en un expediente, ya sea como parte de un peritaje directo o como un metaperitaje, extrayendo el máximo de información no sesgada a fin de establecer las hipótesis relevantes del caso y valorar los posibles factores de influencia.
Palabras Clave: Psicología del Testimonio, Declaraciones, Testigos, Sesgos, Heurística, Peritaje, Expediente judicial.

Under the holistic approach to the assessment of testimony (HELPT), this paper describes a protocol for the analysis of all of the information that can be extracted from a judicial file, regarding the knowledge of heuristic principles and psychology of testimony. The aim is to provide a systematisation for expert reports about the topics that could be explored in a file, extracting the maximum unbiased information to establish the relevant hypotheses of the case and evaluate possible factors of influence.
Key Words: Witness statements, Witnesses, Bias, Heuristic, Expert report, Judicial file.

In a recent review (Köhnken, Manzanero & Scott, 2015) of the protocol for analysing the credibility of statements (Statement Validity Assessment or SVA; Köhnken & Steller, 1988; Steller & Köhnken, 1989) the limitations and the application procedure of this technique were analysed. The review indicates that the most important –and indeed crucial– component, of SVA is the rigorous establishing of the hypotheses, that is, the analysis of all of the potential sources or origins of the statement. Everything else, the assessment procedure, the data to be collected and the specific assessment strategies depend on the formulation of these hypotheses. As it has been established, the application of the CBCA criteria would be used only to analyse the statements of minors that are the alleged victims of sexual abuse with the aim of testing the hypothesis of their deliberately false testimony. For the assessment of hypotheses other than that of intentional false testimony, it has been proposed to carry out other types of assessments, based on the analysis of the influencing factors that may have led to a statement being unintentionally incorrect (Figure 1). Thus, in the context of the holistic assessment of testimony (see the holistic approach to the assessment of testimony, HELPT; Manzanero, 1996; Manzanero & Gonzalez,

2013, 2015) a proposal has been developed for the analysis of the available information in each case for generating and testing hypotheses.

The criminal justice process is an essentially human act and as such is not without bias. Police, witnesses, victims, suspects/defendants, prosecutors and lawyers are the actors that shape the course of this process, and judges determine the outcome. Addressing a judicial process includes the approach, investigation and resolution of a situation/problem: establishing the circumstances of the events and the actors involved. Tversky and Kahneman (1974) state that any approach to process new information is regulated by heuristic rules. Heuristic rules are the cognitive rules that, unconsciously, every human being applies when processing the information he receives from outside; they enable us to reduce complex tasks, assigning probability and predicting outcomes for simple judgement operations. Kahneman (2011), proposes that the processing of any information involves two systems. System 1 operates quickly and automatically, with little or no effort and no sense of voluntary control. Generally System 1 is referred to as *intuition*, because it reaches conclusions quickly, without waiting for rational consciousness. It has almost instant access to the associative memory, which it uses as a reference in order to come up with conclusions. Kahneman suggests that if a conclusion is believed to be true, it is most likely that arguments that appear to support

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it will be believed even if they are questionable. "System 1 does not examine alternatives and reject them, nor does it even recognise the fact that there are alternatives. Conscious doubt does not exist in the repertoire of System 1 "(Kahneman, 2011; pp. 299). When System 1 acts, "the conclusion comes first, and the arguments afterwards" (Kahneman, 2011; pp. 162).

System 2 focuses the attention on the controlled mental activities that require it, including complex calculations. The operations are associated with acting, choosing and concentrating. System 2, through the slow process of analysing and critically examining the available evidence, reaches judgements that are more conscious. To do this, it takes into account the inputs from System 1, but since "System 2 is capable of doubting, and considering incompatible possibilities at the same time" (Kahneman, 2011; pp. 420) it reviews the available alternatives.

There are biases inherent in both systems. Kahneman argues that a thorough knowledge of heuristic procedures allows a clearer vision of the context in which decisions are made and discrepancies are analysed, thereby achieving greater control of bias. And here is an

FIGURE 1
PROPOSED PROTOCOL FOR DETECTING SEXUAL ABUSE
(KÖHNKEN ET AL., 2015)

important caveat raised by this author: many of the intellectual tools can make us believe that the System 2 has been implemented, when this has not yet happened, these tools becoming deceptive thought substitutes; System 2 is activated only when the easy alternatives have been exhausted, certainty is abandoned and the person actually begins to think. Therefore, pondering these heuristics and their possible biases is work that must be done throughout the entire criminal justice process. This is why the analysis of the judicial file is so important, and the inherent risk in carrying out this analysis using thought substitutes, drawing conclusions before testing the arguments one by one, is even more significant. No subsequent analysis will be valid if the resources that avoid the biased simplification of the initial information are not exhausted.

In science, different methods have been proposed in order to meet the above objectives, allocating more weight to reason, but not excluding intuition. In this case, however, we are talking about "scientific" intuition, which comes from the prior consideration of all of the existing information on the subject, which through unconscious processes could lead to new knowledge (insight). Human limitations in thinking capacity determine the amount of information that we are able to consider rationally when making a decision. Since the reality is multifactorial, we cannot consider all of the factors simultaneously, together with all of the possible interactions between them. Sometimes an oversimplification of the reality takes us away from the truth, even when the principle of Ockham's razor establishes that, all conditions being equal, the simplest explanation is usually the truest. For example, we have seen how negative memories do not appear to be distinguished from positive ones if we consider their characteristic features separately, but a big difference can be seen if we consider them all together (Manzanero, López, Aróztegui & El-Astal, 2015). The problem is that intuition as a scientific method has serious problems, as it can fall into subjectivism. When we have to make a decision in a particular case, it is not enough to establish that there are differences between the various versions of the accounts with regards to their valence, but rather the direction of these differences must be considered (see Figure 2, which represents graphically the intra-subject differences of the memories of positive and negative events).

To reduce the variability and facilitate the analysis of the information, we will apply biases that allow us to allocate more weight to some factors than to others, and thus to select them, discriminating between the "relevant" and the
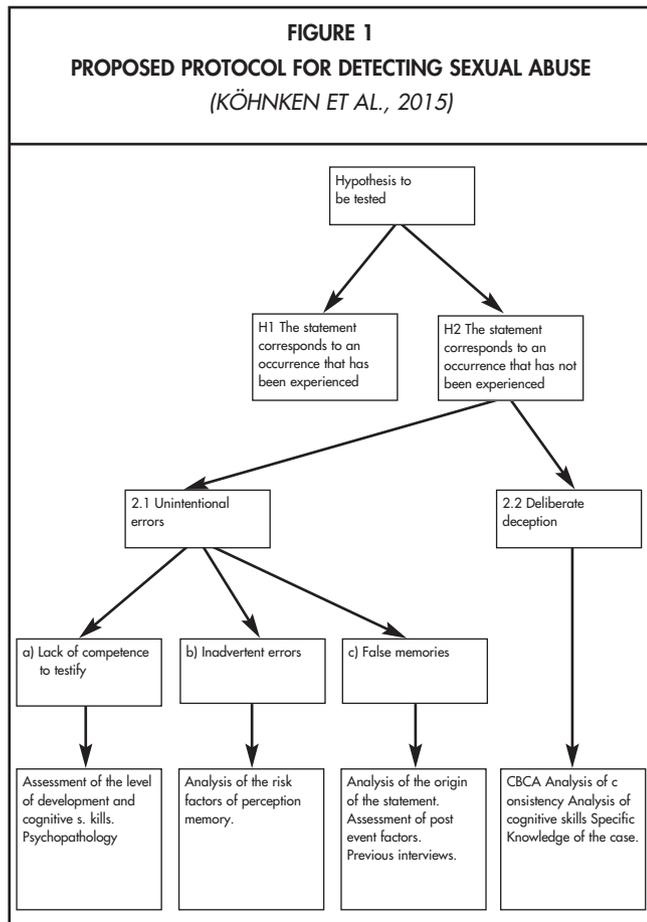
"irrelevant" factors. The problem of these biases is that they could lead to a wrong decision, since they are not based on evidence-based reason.

The most relevant biases in the processing of new information described by Tversky and Kahneman (1974) are in Table 1.

Intuition or "inductive logic" (Carnap, 1950; Hempel, 1945), was radically criticised by Popper (1959) who stated that the scientific method is not induction but conjecture and refutation by the method of falsifiability. Thus, we can only falsify hypotheses, but not confirm them. Extrapolating this to the expert analysis would mean that it is not possible to confirm (to establish as the truth) any of the hypotheses made (the only real truth is the judicial truth, and establishing this falls to the courts, not to the experts), but rather that it is only possible to report that hypotheses are incorrect because they go against scientific evidence (of theories of evolution, development, cognitive functioning, empirical data, etc.).

On this subject, the psychology of testimony is the science that establishes the evidence regarding the functioning of the memory of witnesses, suggesting that the accuracy of statements depends on the factors that exist in each case (Manzanero, 2010). A testimony includes the description of a past event and the actors that participated in the event, and therefore it is a memory, and the memory, as with many cognitive processes, is

affected by a great number of factors that can be classified as follows:

a) Witness factors: Each person encodes the information and interprets it according to individual differences, in which experiences, knowledge and personal variables play an important role. The most important personal variables are gender, age, intellectual capacity, stereotypes, anxiety, involvement and mental state.

b) Event factors: The event characteristics that most influence the accuracy of testimonies are the perceptive conditions, the type of information requested, the familiarity, the frequency and the type of event.

c) System factors: This refers to all of the variables that may affect the testimonies from the moment the event occurs until the witness is prompted to retrieve the information. These include variables such as delay, multiple retrieval, retrieval format, event multiplicity and post-event information.

FIGURE 2
INTRA-SUBJECT DISTANCES BETWEEN NEGATIVE MEMORIES (BLACK DOTS) AND POSITIVE MEMORIES (WHITE DOTS), REPRESENTED USING TECHNIQUES OF HYPER-DIMENSIONAL VISUALISATION, INCLUDING THE EIGHTEEN DIMENSIONS ASSESSED (MANZANERO ET AL., 2015)
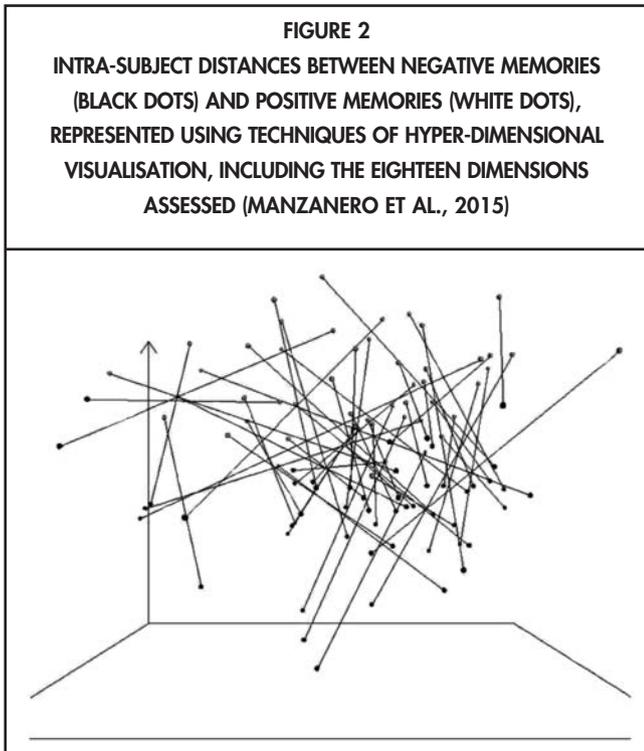
TABLE 1
THE MOST RELEVANT BIASES IN PROCESSING NEW INFORMATION (TVERSKY & KAHNEMAN, 1974)

Heuristic Procedures	
Representativeness	This procedure leads to statistical and mathematical errors in the calculation of probability, derived from insensitivity to the previous probability of outcomes and to the sample size, as well as errors in the randomness and in relation to what is known as the "regression toward the mean".
Availability	The subject proceeds to assess the likelihood of the occurrence of an event, considering the ease with which the subject himself[1] is able to remember or imagine examples of similar events.
Anchoring	This mental process is based on the subject performing an estimate, using an initial value (anchor), which is adjusted progressively as she obtains additional information.
Hindsight bias	In evaluating certain past events, the subject cannot ignore the consequences of these events, so he falls into a tendency to consider, based on the knowledge of the consequences of the action, that these consequences were foreseeable from the start.
Confirmation bias	Tendency of the subject to filter the information she receives, such that, unconsciously, she searches and overstates the evidence and arguments that confirm her own initial position, and ignores and does not evaluate the evidence and arguments that do not support this position.
In group bias	The subject evaluates the attitudes, actions and opinions of people belonging to the same group, in an unjustifiably homogeneous way, and simply on the basis of belonging to this group. These prejudices can be both positive and negative, and may occur due to the subject herself being -or not being- a member of one of these groups.

[1] *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'.

The main problem we face from a practical standpoint is that much of the scientific evidence relating to eyewitness memory and forensic psychology is not taken into account when making decisions on the assessment of cases (see, for example, the recent study on child sexual abuse by Pelisoli, Herman & Dell'Aglio, 2015).

The analysis of a statement, must therefore consider the overall context, it being equally important to delve into the events under investigation, as well as everything that has happened before and afterwards.

What is described by heuristics and psychology of testimony is of particular relevance when it comes to understanding the role of the forensic psychologist, which in general terms could be described as the collecting and evaluating of antecedents, in order to provide an informed opinion to the person that asked the psycho-legal question, the origin of the expert intervention. In this area of action, the reading of court records is the first contact that the specialist makes with the facts to be investigated; it is necessary and essential that the specialist has full, unbiased knowledge of the facts under investigation. These prior records are fundamental in the designing of the forensic investigation to be carried out, and in constructing the hypotheses to be developed.

ANALYSIS OF THE JUDICIAL FILE

Below is a proposed protocol aimed at extracting the available information contained in a judicial file analytically and with the maximum possible control of bias when undertaking this task.

General background

The information contained in a judicial file enables us to answer the following questions:
✔ What is the crime in question?
✔ When did it supposedly happen?
✔ Who is the defendant?
✔ What relationship does he have with the witness?
✔ Are there prior statements from this witness in the case file?
✔ If so, what is their content?
✔ When did the witness first mention the crime?
✔ To whom did she mention it?
✔ Was it mentioned spontaneously or in response to specific questions?
✔ How long after the alleged event?
✔ How did the defendant respond to the accusation?
✔ Were there any changes to the statement after the first time it was reported?
✔ If so, what changes have been made?

✔ Can these changes relate to specific events (e.g., interviews, post-event information)?

Analysis of the witness factors
✔ What do we know about the witness? Gender, age, education and culture
✔ Assessment of the ability to testify: What is the witness's verbal ability, cognitive ability, quality of memories, and assessment of prior knowledge about the crime?
✔ How is the quality of the witness's autobiographical memories? Is there any autobiographical memory of proven reality that could be used to assess this?
✔ Is there any indication that the witness possesses an intellectual disability that could be relevant respect to the event in question?
✔ Is there evidence of emotional or behavioural problems that could have distorted the statement?
✔ Are there any inaccuracies that could be expected, due to situational circumstances (e.g., stress, the passing of time, recurring events) or cognitive disabilities (e.g., limited verbal abilities)?
✔ Is there prior knowledge that could interfere with the statement? (Preparation for the statement, knowledge of previous statements)
✔ What is the degree of involvement of the witness with the alleged events?
✔ Is there any history of drug use or another situation that could alter his mental state?

Analysis of the event factors
✔ Analysis of the situational factors that could have had an impact on the statement:
✔ Are the perceptual, visual or auditory conditions of the witness (distance, lighting, noise) being evaluated?
✔ How long did the event last for?
✔ Was it a single or repeated event?
✔ What kind of attention did the witness pay to the details of the event? Was there anything particularly striking about the acts or the people that committed them?
✔ Did the witness have prior knowledge and experience of similar incidents to the event in question?
✔ What are the characteristics of that particular crime?
✔ Was there violence?
✔ What details from the event are remembered?

Analysis of the system factors
✔ How much time passed after the incident until the witness recalled the events?
✔ When did the witness talk about the events first?
✔ To whom?

✔ On what occasion?

✔ How many times has the witness had to describe what happened? To how many people?

✔ What kind of retrieval formats have been used? Are they narrative or interrogative?

✔ Were the questions that the witness was asked open or closed?

✔ What is the relationship between the people who asked the questions and the witness?

✔ Can any prejudice be observed regarding the alleged facts?

✔ What previous information did the witness have of the crime?

✔ What subsequent information has the witness received that is directly or indirectly related to the facts under investigation?

✔ Were the testimonies in the judicial file obtained using validated techniques in forensic psychology? Was any technique used (e.g., puppets, drawings or games) to facilitate the describing of the events?

✔ Is there information that there was any possibility of suggestive influences on the witness?

✔ Are there elements that could have contaminated the testimony? If so, what are they?

In order to systematise the information obtained, the construction of a timeline is recommended, to facilitate the chronological integration of the events after a correct analysis of the factors of influence that may or may not have affected the witness statements.

GENERATING SPECIFIC HYPOTHESES REGARDING THE CASE

After the file has been analysed, specific hypotheses must be developed regarding the case. As many hypotheses as possible should be raised, depending on the specifications of the case being assessed, although it has been suggested that a minimum number of hypotheses should be considered in order to maintain the objectivity of the analysis (Raskin & Esplin, 1991). A hypothesis is a declaration that is put to the test, with the aim of explaining a certain phenomenon, seeking evidence for and against it. In order to be able to test a hypothesis, it is necessary to make predictions (of the type *if... then*). For example, "if a statement is the product of the imagination, then it must evolve over time increasing the seriousness of the facts and enriching the statement each time with more details." Or this one: "if a statement is true then it must evolve with time, losing details and altering the peripheral information whilst maintaining the core information." The analysis should never be restricted

prematurely to one single presumption regarding the source of the statement and alternative explanations of a statement or conduct must always be considered. The problem here is to properly define the facts that would enable the prediction –and therefore the hypothesis– to be confirmed or denied, as well as the method of observation/measurement of these facts.

If the procedures for detecting or collecting the facts assume the truth or falsity of the hypotheses, this would constitute self-confirmatory or self-refuting strategies. For example, "often the alleged victim of child sexual abuse does not tell you what happened, but if she does tell you, it has really happened." So, whether one thing or the other happens, the data will always support the hypothesis that this is a real victim. Similarly, the hypotheses and the facts defined for their confirmation must be related, such that it is not possible to explain them in multiple ways or due to multiple causes. For example, "the presence of alterations in behaviour are not facts that confirm the existence of sexual abuse because they can occur due to multiple causes, including the normal evolutionary development of children" (on the validity of clinical indicators of child sexual abuse see Scott, Manzanero, Muñoz & Köhnken, 2014).

Thus, the testing of the hypotheses of the case involves the implicit question, "why could the statements be wrong?" The possible causes of incorrect statements (Köhnken, 2004; Köhnken et al, 2015) are as follows:

a) Involuntary incorrect statement (unconscious)

✔ Incorrect statement due to, for example, incomplete perception, inadequate interviews etc. (unintentional error)

✔ Incorrect statement due to suggestive influences

✔ Incorrect statement due to, for example, insufficient cognitive abilities, e.g., very young children, witnesses with intellectual disabilities, the elderly

b) Intentionally incorrect statement (lie)

✔ Potential causes of intentionally false statements (lies)

✔ The witness makes an incorrect declaration in order to harm another person

✔ The witness makes an incorrect statement in order to get out of a difficult situation

Hypotheses must therefore be generated regarding the potential sources of the statement. These hypotheses must be exhaustive; that is, all of the potentially relevant hypotheses that could explain the witness statement must be considered and assessed. To comply with this, it is suggested that this information is collected systematically and referring to the sources from which these antecedents are obtained for each of the hypotheses raised.

CONCLUSIONS

The proposed protocol for the analysis of the judicial file aims to obtain as much information as possible in order to contribute to the genuine construction of alternative hypotheses. In the same way that scientists aim to get to the truth by disproving hypotheses, the analysis of the judicial file must also be performed avoiding any corroboration of initial beliefs that could become anchoring values. If this is not ensured, the analysis runs the risk of ignoring potentially relevant information, and biasing the conclusions. Thus, it is expected that more questions than answers will be found at this stage of the analysis. If this is the case, it is likely that the analysis has been guided by the hypotheses rather than by confirmatory bias.

Once the information contained in the file has been analysed and the hypotheses raised, the examination of the witness should be planned, according to best practice in interviewing and taking care to respond to all of the relevant hypotheses that have been extracted from the antecedents and from the knowledge of the case. The British physicist James Clerk Maxwell suggested, in the nineteenth century, that you have to know a lot to be a scientist, but knowing a lot is not what makes a scientist; what makes a scientist is ignorance. For scientists, the facts are only a starting point. Fully conscious ignorance is the prelude to the real advancement of knowledge. The facts should be used to generate more questions, this being known as "higher quality ignorance". Undoubtedly, this is the essence of working with hypotheses. It requires us to be constantly open to questioning and to explain the origins of each and every one of our claims, in order to avoid the cognitive ease that heuristics tempts us with and preventing the functioning of System 1, which "goes ahead of the facts, constructing a rich image on the basis of scraps of evidence" (Kahneman, 2011; pp. 421).

REFERENCES

Carnap, R. (1950). *Logical Foundations of Probability*. Chicago: U. Chicago P.

Hempel, C. G. (1945). Studies in the logic of confirmation. *Mind, 54*, 1-26.

Kahneman, D. (2011). *Thinking, fast and slow*. New York: Macmillan.

Köhnken, G. (2004). Statement validity analysis and the ''detection of the truth''. In P. A. Granhag & L. A. Strömwall (Eds.), *Deception detection in forensic contexts*, (pp. 41–63). Cambridge, UK: Cambridge University Press.

Köhnken, G., Manzanero, A. L., & Scott, M. T. (2015). Análisis de la Validez de las Declaraciones (SVA): mitos y limitaciones [Statement Validity Analysis (SVA): myths and limitations]. *Anuario de Psicología Jurídica, 25*, 13-19.

Köhnken, G., & Steller, M. (1988). The evaluation of the credibility of child witness statements in the German procedural system. In G. Davies & J. Drinkwater (Eds.), *The child witness: Do the courts abuse children?* (Issues in Criminological and Legal Psychology, 13) (pp. 37-45). Leicester, UK: British Psychological Society.

Manzanero, A. L. (1996). Evaluando el testimonio de menores testigos y víctimas de abuso sexual [Assessing the testimony of child witnesses and victims of sexual abuse]. *Anuario de Psicología Jurídica, 6*, 13-34.

Manzanero, A. L. (2010). *Memoria de Testigos: Obtención y valoración de la prueba testifical [Witness memory: Obtaining and evaluating testimony]*. Madrid: Pirámide.

Manzanero, A. L. & González, J. L. (2013). *Avances en Psicología del Testimonio [Advances in Eyewitness Testimony]*. Santiago, Chile: Ediciones Jurídicas de Santiago.

Manzanero, A. L. & González, J. L. (2015). Modelo holístico de evaluación de la prueba testifical (HELPT) [A holistic model for the evaluation of the testimony (HELPT)]. *Papeles del Psicólogo, 36*(2),125-138.

Manzanero, A.L., López, B., Aróztegui, J., & El-Astal, S. (2015). Autobiographical memories for negative and positive events in war contexts. *Anuario de Psicología Jurídica, 25, 57-64*.

Pelisoli, C., Herman, S. & Dell'Aglio, D. D. (2015). Child sexual abuse research knowledge among child abuse professionals and laypersons. *Child Abuse & Neglect, 40*, 36–47.

Popper, K. R. (1959). *The logic of scientific discovery*. London: Hutchinson.

Raskin, D. C. & Esplin, P. W. (1991). Statement validity assessment: Interview procedures and content analysis of children's statements of sexual abuse. *Behavioral Assessment, 13*(3), 265-291.

Scott, M. T., Manzanero, A. L., Muñoz, J. M., & Köhnken, G. (2014). Admisibilidad en contextos forenses de indicadores clínicos para la detección del abuso sexual infantil [Admissibility of clinical indicators for the detection of child sexual abuse in forensic contexts]. *Anuario de Psicología Jurídica, 24*, 57-63.

Steller, M., & Köhnken, G. (1989). Criteria-Based Content Analysis. In D. C. Raskin (Ed.), *Psychological methods in criminal investigation and evidence* (pp. 217-245). New York: Springer-Verlag.

Tversky, A., & Kahneman, D. (1974). Judgment under uncertainty: Heuristics and biases. S*cience, 185*(4157), 1124-1131.