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Application of content criteria in the statement analysis with regard to the reconstruction of the context of events by an eyewitness

Summary

The main reason for this study was authors' awareness of lack of objective criteria for eyewitness statement analysis that would consider the situation in which the statement was collected. The standard model of witness interviewing used nowadays does not guarantee satisfying information. Based on this assumption, the authors conducted an experimental study. The experiment was set to compare the effectiveness of a typical interview and a cognitive interview. Subsequently, the statements were analyzed with the use of different methods based on content analysis criteria, such as: Reality Monitoring, Statement Validity Assessment and Multivariable Adult's Statement Assessment Model. Findings of the conducted research confirmed authors' assumptions.

Keywords Cognitive Interview, reliability assessment, statement context analysis, free assessment of evidence

Introduction

Most criminal court adjudications in criminal trials are based on evidence taken from an eyewitness, i.e. witness statement, depositions of suspects or defendants, as well as oral expert opinions. The aim of their assessment, which is subject to the provisions of Article 7 of the Polish Code of Criminal Procedure (CCP), is to apply the principle of the objective truth, specified in Article 2 paragraph 2 of the Polish CCP, which is crucial in a criminal trial. According to this principle, the real established facts should serve as the basis of any adjudication. This provision is a general directive that combines two specific rules, i.e. judicial bodies are obliged to use their best efforts to establish real facts; a judicial body exerting judicial control is obliged to verify whether the body that passed the challenged ruling established the facts properly.

The following conditions guarantee an objective truth:

- the obligation of evidence initiative of the judicial bodies, irrespective of the steps taken by the parties;
- adversarial nature of the court trial and its elements in the preparatory proceedings;

- timing and location of the proceedings during a court trial and statutory deadlines for the preparatory proceedings;
- court control in the preparatory proceedings;
- collegiality of the court and the participation of society members in adjudication;
- praxelological approach to the purposefulness of the procedural acts in criminal proceedings, resulting from human experience and scientific guidelines;
- the system measures of appeal for court rulings [1, p. 225].

The evidence analysis consisting of the verification of the reliability of particular statements or depositions is conducted according to the principle of unbounded evidence evaluation. In accordance with Article 7 of the CCP, judicial bodies build their conviction based on all evidence heard that undergoes unbounded analysis based on the principle of logical reasoning, scientific knowledge and life experience. Since the procedure in place does not provide any rules for legal evidence evaluation, the Roman legal maxim that *a solitary witness is no witness at all* can be excluded, which makes convicting a defendant based on the statement of just one witness possible, provided that the evidence evaluation is based on facts and logical reasoning and not on the judges sole discretion [2].

It should be noted that the obligations stipulated in Article 7 of the CCP regard not only issues connected *sensu stricto* with the law, but also include a possibility or even a necessity to use areas of expertise other than the legal sciences. While assessing the evidence, the legal adjudicator has to consider the fact that psychologically, there are a number of verbal indicators or factors connected with the so called indirect speech or body language that might show purposeful deception by the witness and his untrue statements (slips of the tongue, evasive or twisted statements, using a small number of words, providing little detail, extensive generalizing). Human memory tends to generate ideas and is not a perfect copy of the reality. Therefore, it may become distorted. It is important to note that witnesses reporting particular events may be emotionally involved to a various extent. Since they have various perspectives, their recollection of events may partially differ. Therefore, some depositions should not be considered manipulated only because they are not exact, taking into consideration the fact that they concern past events and have been made after some time [3].

Evidence evaluation, especially consisting in determining the reliability or unreliability of the witness statements or depositions of suspects or defendants, is an issue of utmost importance. The more so, since in practice it frequently happens that the only evidence in the case is the statement of the injured party on the one hand, and the deposition of the suspect/defendant on the other hand. In such a case, putting faith in the statement or deposition requires thorough justification. There is no principle of evidence assessment supporting the idea that the statement of a single witness is insufficient to convict the defendant. Similarly, it is unacceptable to evaluate the statement based on the social status or a public office of a witness. However, the evidence given by a single witness cannot be contrary to other reliable pieces of evidence that are in fact not decisive in terms of the defendant's responsibility, but can be subject to further factual analysis as for certain stages of the event [4].

The reason why the authors of this article carried out the research presented below, was the awareness of the lack of objective criteria, the fulfillment of which could be the condition for considering the witness statement reliable. Since the current model of taking statement from witnesses, suspects (defendants) in a typical police interview does not make it possible to acquire evidence sufficient to establish all facts, it was decided to compare the statements obtained using the method of a typical police interview and (partially) the Cognitive Interview. Next, the statements obtained in the research were analyzed using selected

methods including content analysis criteria, i.e. Reality Monitoring, Statement Validity Assessment, Multivariable Adult's Statement Assessment Model that are presumably useful tools for the establishment of the psychological conditions for the reliability of evidence taken from a person. The obtained results are presented below.

The methods of the assessment of statements listed above should in practice help judicial bodies establish facts, at least by being applied for drafting psychological expert opinions. Still it is unquestionable that a court expert is not authorized to decide whether a statement is reliable or not. It depends on an independent court decision. On the other hand, court experts may refer to their own observations and a psychological examination (tests) they performed when discussing the circumstances on the basis of which the court will be able to take the right decision regarding the proper perception, remembering and recall of events by the witness, as well as their tendency to confabulate or lie, which will lead to a logical conclusion on whether this person, while reporting the facts concerning the allegations, is diverging from reality [5].

Theoretical foundations

Stages of witness interviewing

The process of the development of evidence material, the effect of which the witness reports are obtained during an interview, consists of three stages: perception, remembering, and recall of the perceived events. The perception of the event by the witness happens on two levels: sensory and semantic-operational. In the first case, the sensory perception is possible through the senses of sight, taste, smell, and touch. On the semantic-operational level the sensory perception is defined. As for the court activities, the witness perception is an element of obtaining information that also includes a number of other direct or indirect cognitive processes aimed at acquiring knowledge about some part of the reality. [6, p. 142-143]. Another stage of obtaining witness statements is remembering, which is connected with the perception stage. It consists in the human mind recording information supplied by stimuli. It strictly depends on the individual experience of a person. [6, p.144]. The third stage of obtaining witness statements is the recall, i.e. proving information. This stage may consist either in the identification or reproduction of the remembered and stored content. The recall is a process of a renewed update of one's knowledge or habitual reactions that also refers to the

previous stages. Therefore, it shows the capacity of human memory [7, p. 1640].

The information obtained as a result of the above-mentioned cognitive processes, is affected by both subjective factors, depending on individualized data of the observer of the event, as well as objective (external) factors that the interviewed person has no influence on.

The subjective factors, which are particularly worth mentioning, are the effect of sex and age on the process of obtaining evidence from a person. The first study to examine the effect of sex on the witness statement was carried out in the second and third decade of the twentieth century. The authors who believed that men were more reliable witnesses included Stern, Heindl, and Rudlowsky. On the other hand, Schramm, Wreschner, Breking and Mille Borst claimed that women were better observers. [8, p. 67]. Despite the years, the issue has remained unsolved. However, it has been indicated that one of the most striking differences between women and men is the tendency to use evaluatively either extremely positive or negative statements, the so called Pollyanna principle. Women are much more prone to evaluate events either extremely positively or negatively. Most researchers also believe that women more frequently than men provide accurate assessments, especially with regard to emotional expression. Generally, it may be considered that the difference between sexes in the perception of persons lies in the stronger tendency in women to focus on the positive evaluation, both when it comes to the content and diversity of their descriptions. Women focus mainly on the description of psychological features, in particular those that affect interpersonal skills [9, p. 84–85]. It should be pointed out that according to A. Rożnowska descriptions made by women included more elements of clothing, whereas those made by men were abundant with information regarding the height, age, and the way of conveying the message. Women are more susceptible to suggestion. They adapt their evaluation to self-presentation. They were more accurate when their objects of perception were men. On the other hand, the descriptions made by men were shorter, poorer and contained a smaller number of psychological and physical features [10, p. 68].

The subjective factor of the age of the witness, as well as the resulting cognitive maturity depending on the knowledge and life experience, is also significant in the process of obtaining statement. The vaster the experience, knowledge, and intelligence, the greater the ability to perceive facts correctly and recall them reliably. The perception and related ability to observe function properly until the so called senile changes,

which develop at different age for all individuals, usually at 65 on average. With age, when senile changes develop, the reasoning weakens, resulting in the tendency to generalize, leaving facts aside, difficulties in distinguishing between the significant and insignificant pieces of information if they are reported in a similar way. When classifying items, elderly persons show the tendency to develop too specific or too general categories, often based on their usefulness or obligation. They also create categories based on a combination of concrete facts and events. It is most difficult for elderly persons to recover information from their long-term memory. It is less difficult for them to recall facts by means of recognition rather than reproduction [8, p. 69].

Among the subjective factors mentioned above are also the concentration ability of the witnesses, their motivation, emotional condition, the level of attractiveness of the object of observation, their social role, as well as the stereotypes and bias they may base their judgment on. At the same time, it should be pointed out that objective factors, including the circumstances and timing of the observation or the time span between the observation and the recall, play an equally important role in the assessment of the witness statement [8, p. 66, 80].

Witness interview

As indicated before, the witness statements and depositions of suspects and defendants reflect not only their knowledge, memory capacity, or the willingness to cooperate with law enforcement bodies, as well as (or perhaps most of all) the conditions and way of carrying out the interview.

The commonly used typical police interview, specified in Article 171 of CCP, does not include sufficient involvement of the witnesses to facilitate their exhausting statement. Neither does it encourage them to give statement. They remain passive participants of the interview. Their statements are supplemented provided that they are asked questions. Before the record of the witness interview is read, the interviewer should attempt to obtain spontaneous witness statements, as each witness should testify what they remember. Simultaneously, the interviewer should help the witness recall the forgotten details by asking appropriate questions. The court should not confine itself to accepting witness statement such as: "I don't remember anything", although "I know what happened", and having read the record of the witness interview, to accepting witnesses' confirmation of their previous depositions. Such a plaintiff's examination blatantly violates the principle of direct examination, making it an artificial procedure, which affects the

process of establishing the objective truth, thereby hampering reaching a correct verdict [11].

The evaluation of the evidence from witness statements, as well as defendant's depositions, on the one hand, consists in the analysis of the content of the statements, and on the other hand, the assessment of the witness, i.e. their intellectual level, traits of character, emotional condition during the interview, etc. Therefore, a direct contact with the interviewed person, the observation and impressions from the interview, have a great significance for the correct evaluation of the reliability of the evidence [12].

In compliance with the Polish criminal procedure, the instruction specifying the method of a typical police interview that includes the question: "What do you know about this case?" focuses the witnesses' attention only on recalling the facts they consider particularly important. In consequence, the obtained evidence is insufficient, leading to repeated interviewing of the same person in a single case. It needs to be noted that not without significance in this case is the lapse of time, disinformation that the witness is exposed to between the first and the subsequent interviews, as well as the risk of them being vulnerable to suggestions when hearing their previous statement that is read out based on Article 391 of CCP. Therefore, the authors of this comparative analysis turned to the Cognitive Interview (CI) method applied in many countries. According to numerous studies [13, p. 3] this method makes it possible to obtain more evidence material, with an average rate of 25% more correct information, in comparison with the typical witness interview [14, p. 340]. This method is acceptable and particularly recommended in countries like the United Kingdom, where a special government program named PEACE was run. In the program, police officers from 43 boroughs in the country underwent multistage trainings in the practical use of this technique [15, p. 679].

The primary instruction referring to the technique was developed in 1984 in the United States by psychologists E. Geiselman and R. Fischer, upon request of the state police in Florida. The basic version of the procedure consisted of four stages: reinstatement of context, reporting everything, recall in a variety of temporal orders, change of perspective. With time and in the face of other experimental studies and conclusions of technique's practical use, the instruction was extended by additional stages in order to deepen the contact between the interviewer and the witness. The current modified instructions are known, among other things as Enhanced Cognitive Interview – ECI (2004), Modified Cognitive Interview (MCI), in particular the children interviewing technique [17].

Evaluation of witness statement

The evaluation of evidence, both that obtained from a person, as well as material evidence, is carried out based on Article 7 of CCP stipulating that the judicial bodies base their judgment on all collected evidence that has been evaluated freely in accordance with logical reasoning, knowledge and life experience. From a psychological point of view there are many elements that are significant for the final evaluation of the statement as reliable. The application of objective criteria of content analysis as a tool to comply with the provisions of Article 7 of the CCP may be helpful. Perhaps the criteria might be used in the case when a judicial body raises doubts as to the reliability of the statement. However, their verification by means of such procedural acts in criminal proceedings as a confrontation, visual inspection and others does not dispel the doubts. The authors of this article examined two methods of content analysis that are most popular and commonly applied in court procedures in some western countries (e.g. Germany), i.e. Statement Validity Assessment (SVA) and Reality Monitoring (RM), as well as the modern Multivariable Adult's Statement Assessment Model (MASAM) designed by Bartosz W. Wojciechowski, developed in recent years in the Department of Clinical and Forensic Psychology of the University of Silesia [18].

The proposed content analysis tools have a similar structure and application, since they are based on a common theory that memories of real experiences differ in content and quality from the fictitious ones. This theory is known as the Undeutsch hypothesis [19]. The authors of each of these methods drafted a list of criteria of verbal cues of the statement. By means of a specific tool, a psychologist determines the intensity of each of those cues in a given statement. Next, based on the general outcome and results obtained for particular criteria, it is estimated to what extent the statement corresponds with the real course of the case. However, particular methods differ in terms of the number of criteria and details of the underlying theories. Statement Validity Assessment (SVA) is a technique developed in Germany by M. Stehler and G. Kohnken [20, p. 217] in order to determine the validity of children statements made in cases of sexual offences [21, p. 111]. Recently, studies have been launched to establish the usefulness of this technique in the evaluation of statements made by adult witnesses in various circumstances. So far the results of the studies have shown that the possibility of determining the validity of statement using this method is greater than by a random choice. The technique presented by the authors includes 19 basic criteria and a validity check list containing eleven

additional questions. Another popular method, Reality Monitoring (RM), developed by M. Johnson & C. Raye [22, p. 67] includes eight basic criteria (Sporer's list), whose intensity is determined by means of 54 specific indicators. The last of these methods used by the authors, designed by B.W. Wojciechowski, although similar in terms of the underlying theories, includes an extremely serious modification, i.e. each criterion is evaluated with respect to the real possibility of fulfilling it based on three major elements. The modification is based on a model of psychological conditions of the outcome of the witness statement proposed by J.M. Stanika [7, p. 164], according to which, the observed object/event, the observer and the circumstances of taking statement, as well as the interviewing technique have a significant influence on the outcomes of the interview. The Multivariable Adult's Statement Assessment Model (MASAM) includes 21 criteria. However, the effect of each of them undergoes evaluation in terms of three aspects: 1) object, event, i.e. objective physical features of the observed elements and circumstances of the event; 2) the observer, i.e. their features such as age, cognitive and emotional processes, as well as personality characteristics and the attitude; 3) the interview, i.e. the types of questions, applied methods, the personality of the interviewer or non-verbal messages. One of the fundamental differences between the methods named above is the definitive approach to the criteria fulfillment in the case of the SVA or RM techniques (fulfilled or not fulfilled). On the other hand, in the case of the MASAM technique the criteria evaluation is carried out in terms of three aspects: the circumstances of the object/event, the observer and the circumstances of the interview.

Empirical study

Taking into consideration the issues concerning evidentiary proceedings discussed in the first part of the article, the authors decided to carry out an experimental study, the outcomes of which may

provide new guidelines on how to intensify the search for objective methods of taking and evaluating the witness statement. The study consisted in a preliminary analysis performed in order to determine whether the search for interdependencies between the method of interviewing witnesses and the results of the psychological evaluation of the statements, carried out by means of various methods of content analysis, has a good research perspective and should be pursued. The authors based their study on the hypothesis that if there are qualitative or quantitative differences between the outcomes of witness interviews carried out by means of various methods of witness interviewing, the differences will also be reflected in the evaluation of the psychological aspects of the validity of the testimonies performed using selected methods of content analysis. According to the logic and principle of the "free assessment of evidence", one should conclude that the higher the number of correct pieces of information in the witness statement, the greater the likelihood that the statement is based on real encounters of the witness. The authors also asked a question whether the result of the analysis depends on the method of obtaining the evidence material (interviewing the witness), or more precisely, whether it depends on the mental retrieval of events by the witness (e.g. since the interviewer asks direct questions, the answers to which are subject to analysis according to the content criteria).

Research procedure

The authors used the method of an experiment. The method of choice for presenting the circumstances of the event to the interviewed individual was the display of a video recording. It has to be clearly noted with full awareness that despite its great popularity and common use in witness examination, this solution is limited in terms of the accuracy of the obtained results, mainly due to the lower intensity of the stimuli and limited number of sensual and emotional experiences that engage the witness at the time of

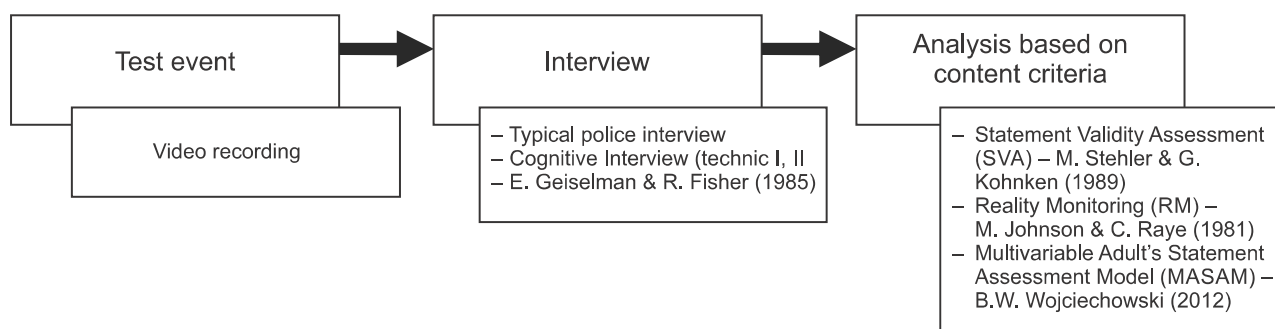


Fig. 1. Proceedings.

the event, as well as the attitude of the experiment participants. However, due to the preliminary nature of the test, this method was employed as a sufficient one to ensure uniform conditions for perception and recollection of information about the event for all respondents. A three-stage research procedure was planned (compare Fig. 1).

The presented material was displayed during training classes to a group of 36 students who volunteered to participate in the research. In order to ensure the proper conditions of perception, the material was displayed on a large size projector screen that guaranteed good image quality. Due to the layout of the room, the respondents were seated at various distances from the source of the sound. In order to eliminate that variable that interfered with the quantity assessment of the statement, only those statements from the film were taken into account that were audible everywhere in the room. The recording was 2 minutes and 37 seconds long. It was registered during one of the previous studies performed in the Department of Clinical and Forensic Psychology of the University of Silesia in 2010 [23, p. 287–302]. The main plot was of an aggressive student who by his provocative behavior prompted a sharp exchange of views with the teacher, and then provoked a fight involving three other students. After the instigator was removed from the classroom, the teacher came back and had a disciplinary talk with the school chancellor. Later he returned to teaching. The presented event was very emotional due to likelihood of similar events in the real life. This situation resembled real-life classes relatively closely, so the group was very interested in the recording and paid attention to the plot. Next, seven days after viewing the recording, all the test participants were subject to an individual interview, when they were asked to recover the remembered information. The interview was carried out by two interviewers according to the priorly adopted instruction. The respondents were divided into two research groups, with one examined using the typical police interview, whereas the other one using the Cognitive Interview (specifically the first two techniques). The respondents interviewed traditionally (20 respondents) received a question with the following wording: *A few days ago you watched a video showing an event in a classroom. What do you know about this matter? Please, say everything you remember about the recording.* After the witness made the statement, the interviewer asked a single question whether the respondent had anything to add [24, p. 162].

The other research group (16 respondents) was examined using the instruction developed by the authors of the method (E. Geiselman & R. Fisher). Since the test was of an illustrative character, the

primary version of the Cognitive Interview method was applied, but only through the first two stages (the mental reconstruction of the event and the free statement). The respondents were asked to provide information according to the instructions: 1) recall of the context of the event; 2) uninhibited report of the event. Particular interviews (interrogations) were audiorecorded and later transcribed in order to perform a further analysis and evaluation. Due to some doubts as to the evidentiary value of the material obtained using the third and fourth techniques, i.e. recalling the events in a reverse order or a change of perspective, it was decided to exclude them from the interview. The researchers who explored the Cognitive Interview method claimed that the interviewed witness rarely provides new, significant pieces of information, encounters difficulties, e.g. feels disoriented or can have the impression of being purposefully misled. Moreover, the instruction alone, may cause the witness to confabulate, since they are required to describe something they have not seen in the reality, and which is purely imaginative (G. Kohnken, personal information, 2010).

However, it should be scientifically analyzed whether the third and fourth technique of the Cognitive Interview method (1984) are effective tools of the verification of the obtained statement. In the last stage of the research procedure the material obtained from witnesses in the arranged interviews was psychologically evaluated using selected tools (methods of content analysis). Each statement was evaluated by means of the three methods specified above, according to the model presented in Figure 2.

Analysis of results

The authors based the analysis of the results on the assumption that the usefulness of the statement for the evaluation of evidence using content analysis methods depends on whether the witness mentally reconstructed the event or not. The analysis of the research material was performed based on the following research hypotheses:

- the use of the techniques of the mental reinstatement of context of the event brings different results in terms of quantity and quality of the statement from those obtained using only the method of the typical police interview;
- the method of witness interviewing is strongly connected with the results of the psychological evaluation of witness statements using the content analysis methods;
- explanatory variables: the capacity of the witness to make statements corresponding with the truth;

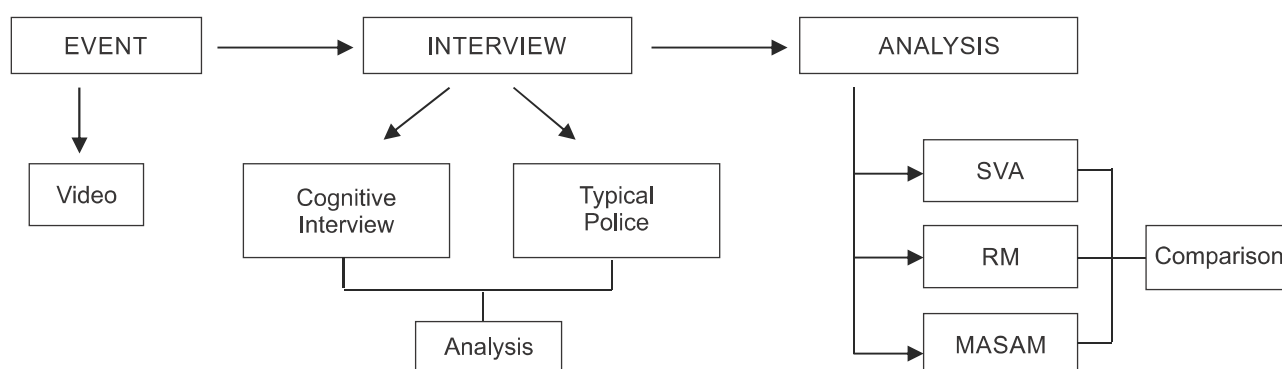


Fig. 2. Research model.

- intermediary variables: methods of witness interviewing (CI-reinstatement of the context of the event and providing full statement, SI – typical police interview);
- response variable: the result of the psychological evaluation of the witness testimonies performed using the content analysis (SVA, RM, MASAM);
- indicators: the mean number of points granted to particular methods; to what extent particular content criteria are fulfilled assuming that the statement reflects the real memories of the respondent.

The statistical analysis should be started with the determination of differences between the testimonies obtained using the selected methods of witness interviewing. Due to a small number of respondents in the study group and the type of the research material, adequate non-parametric statistical methods were used with respect to all data. However, it should be pointed out that the study was only of an illustrative character. The obtained results can only serve as a basis of further studies and set forth the direction of further analysis.

According to the research schedule, it was initiated with a comparative analysis of the results obtained using various methods. It was not the aim of this study to carry out a detailed analysis of the differences in the testimonies obtained using a mixed method or the Cognitive Interview method. However, it should be underlined that the obtained results correspond with the statistical data as opposed to the results obtained in previous studies. All statements obtained from witnesses were divided according to the categories specified by J.M. Stanika [25, p. 394–401] in his own studies, i.e. correct answers (consistent with the event matrix), incorrect answers (inconsistent with the event matrix), switched answers (in principle consistent with the reality, but containing modifications of little significance that have no effect on the substance of the element). The testimonies obtained using these methods show statistically significant differences in two categories of answers - correct or incorrect,

Table 1
Average indexes for categories of information obtained in typical police interview and cognitive interview

	Correct answers	False answers	Inaccurate answers
Cognitive Interview (CI)	24.375	25.875	21.6875
Typical Police Interview (SI)	13.8	12.6	15.95
χ²	10.89000	11.25000	0.4500000
significance	0.0010	0.0008	–

which is illustrated in Table 1 presenting mean values of ranks.

Similarly to other comparative studies involving the CI method, there was an increased number of statements corresponding with the reality as compared to the typical police interview method. However, there was also a significant, almost double, increase in the number of the incorrect answers in the case of this method. Taking into consideration the studies carried out so far (including Memon, Kohnken, and own studies) this dependence was to be expected. Additionally, the small size of a research group should be pointed out, since it had an effect on the significance. Undoubtedly, it is an important regularity that shows the need for a deeper analysis and verification of the statement obtained using the context reinstatement technique in terms of the

Table 2
Average indexes of general statement coefficients – structured interview and cognitive interview

	Completeness	Accuracy
CI	24.034	14.44
SI	14.08	21.75
χ²	0.89000	1.800000
significance	0.0010	–

Table 3

Average indexes (%) for general content analysis methods ratings

	Statement Validity Assessment SVA		Reality Monitoring RM		Multivariable Adult's Statement Assessment Model MASAM	
	Mean result (max. 180)	%	Mean result (max. 306)	%	Mean result (max. 370)	%
SI	123	68.44	95	30.98	318	85.86
CI	119	65.87	153	50.10	355	96.06

validity of the received information, e.g. by means of the content analysis method. The comparison of the general indexes of the interview showed significant statistical differences in terms of the completeness and accuracy, which is illustrated in Table 2. In the case of the CI method used in this study it was possible to obtain a more comprehensive statement than in a typical police interview.

The differences result mainly from the extent of the statement and the length of the interview. The mean duration of the typical police interview in the respondent group was three minutes and 25 seconds, whereas the mean time of the interview using the CI method was 13 minutes and 37 seconds. However, other aspect of using a particular method connected with the high effectiveness of the cognitive interview cannot go unnoticed, e.g. high effectiveness of the mental reinstatement of the correct context of the event. This dependency was noted by E. Tulving already in 1973 [26, p. 352], and later on confirmed by A. Baddeley and D. Godden in studies involving divers. They named the observed phenomenon context-dependency effect [27, p. 325]. However, the reason for an increase in the overall number of answers may be the fact that the witness encouraged to report everything (like in the case of the second technique of the Cognitive Interview), may imagine facts assuming they report their real memories.

The second stage of the analysis of the obtained statement includes the evaluation of the statement using selected techniques of content analysis. Table 3 shows mean values obtained for particular methods.

The presented data show a generally varied effectiveness of the content analysis methods. According to the results of evaluations, each method gives various results of the evaluation of psychological conditions affecting the reliability of the statement. Interestingly, the study analyzed only authentic evidence material (i.e. all respondents took part in the research, so the aim of the used content analysis method was not to verify its reliability, but to check the usefulness of the criteria for various evidence material). MASAM included the most effective criteria for the statement reliability, whereas

the Reality Monitoring was least effective. Moreover, the results obtained by using the described methods of the statement evaluation differed depending on the method of taking statement. In the case of SVA the results obtained were close to the general score, both for the statement taken in a typical police interview and the CI. This means that in the case of the use of this method in order to verify the consistency of the statement with the reality, the method of taking statement is irrelevant. The use of this content analysis method should lead to the same conclusions regarding the reliability of the statement. In the case of the RM and MASAM there are noticeable differences (their significance should not be determined on the basis of such a limited research material). It means that in the case of the techniques of context reinstatement, the use of the latter two methods produced better results than in the case of the typical police interview. Hence, the statements made based on a mental reconstruction provide more material that fulfills the reliability criteria. The way of drawing conclusions from a content analysis should be paid attention to at this point. None of the used methods includes a specific score threshold that would qualify the statement as being reliable. Each statement is evaluated individually. However, the evaluation follows the rule that the more criteria received a high score, the greater the probability that the statement reflects the real experience.

Both in the case of RM, and MASAM, the higher scores were achieved for statements made in a Cognitive Interview method than in a typical police interview. It means that most likely, the interviewing method affected the usefulness of particular methods of content analysis. In both cases higher results obtained through a CI may indicate that this method makes it possible to obtain material that later may be evaluated as correct, even despite a relatively significant amount of false information provided in this type of interview (Table 1). In an attempt to answer the question: "why does the statement obtained in a CI provide a better material for analysis than the statement obtained in a typical police interview"?, it is worth consulting the instruction of witness interviewing. At

all stages of the procedure, the witness is directly asked about the elements that are crucial for specific content criteria (the criteria that were most often fulfilled by the statement used as research material, in the case of the RM, they included emotions, scents, sounds, colors, any perceived information, touch, accuracy of details, order of events, the surroundings or arrangement of object, whereas in the case of MASAM they included: the size of the statement, the character and type of details, sensory input, description of interactions, circumstances, description of internal condition, descriptions of relations). In that way the witness gives answers that make it possible to determine whether a specific criterion was fulfilled or not. Therefore, the cognitive interview method can be deemed as providing better possibilities of taking more useful statement, since it also provides better research material that can be easily verified using the method of content analysis. Another matter is the differences between particular results obtained for each method. Table 3 shows a significant difference in terms of accuracy of the evaluation between particular methods of content analysis. The research procedure revealed that the least accurate tool was the Reality Monitoring (indicators of 30.89% and 50.10% were below random value, which raises doubts as to the grounds for the use of this method, whatsoever). The second best method in terms of accuracy was the Statement Validity Assessment, where no connection between the interviewing method and the evaluation result was observed. The last method, Multivariable Adult's Statement Assessment Model, allowed the judges to most accurately evaluate the statement (with 85.86% accuracy rate for the typical police interview and 96.06% for the statement taken using the CI). Considering the results delivered by this method, the authors of the study deem it reasonable to choose an evaluation method appropriate to the statement obtained using a particular technique.

Discussion

The described research revealed that the most useful (extensive and accurate) witness statements were obtained by using the method of the reinstatement of context for obtaining the research

material, followed by its verification using the MASAM method. This conclusion is extremely interesting, since so far, the effectiveness of the interviewing methods and statement evaluations were analyzed only individually. With regard to the pre-defined research hypotheses, it should be pointed out that the first hypothesis, assuming that the use of the typical police interview and the reinstatement of the context brings different results in terms of the quantity and quality of the statement, was statistically validated. Furthermore, it was shown that the CI method was the most effective way of obtaining extensive statements. The second hypothesis, according to which the witness interviewing method depends on the result of the psychological evaluation of witnesses, performed using the content analysis method, was also confirmed by showing the differences in general results obtained for various types of witness interviewing. Moreover, the research procedure showed that the most effective way to obtain reliable information based on the evaluation of the statement taken using the Cognitive Interview was the MASAM method.

In summary, it should be underlined that taking statement using the CI, and the subsequent statement or deposition content analysis by means of the MASAM method is feasible in view of the Polish criminal law procedure [28, p. 220]. This particular aspect cannot be disregarded. As it was proven above, the obtained results are promising and may be subject to a theoretical analysis. However, only the use of those methods in practice, and, consequently, their effect on the real criminal trial, are the aspects that should not be ignored. Undoubtedly, the performed research had an illustrative character. However, the obtained results, as well as the possibility of practical application of the cognitive interview and MASAM, support not only the need to continue the studies but also show an important role of psychological studies in the fulfillment of the requirements of a criminal trial.

Source

Fig. 1–2: authors

Tab. 1–3: own elaboration

Translation: *Rafał Wierchosławski*