

TESTIMONY VALIDITY: A COMPARATIVE STUDY OF LEGAL AND EMPIRICAL CRITERIA

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A judgement by the Spanish Supreme Court (Sentencia del TS, Sala de lo Penal, de 28 septiembre 1988, RJ 7070) has defined three criteria for the assessment of testimony credibility in cases where there is no evidence other than the complainant's testimony: subjective incredibility, verisimilitude, and persistence in the incrimination. In other words, the criteria are related to the study of the complainant's motivation (subjective incredibility in the absence of motivation for accusation), peripheral corroborations of the complainant's testimony (verisimilitude), and testimony validity understood as internal consistency and consistency over time. In order to determine whether the bases of testimony validity assessment in criminal work are similar or complementary to empirical criteria (SRA, SVA, GES), 100 criminal judgements were taken at random from Aranzadi's database, in all of which the central pillar of the decision was credibility of the testimony, due to a lack of direct evidence. Results show that lack of persistence in the incrimination is a result of persistence (facts and contexts) in the accused's testimony, and that lack of persistence in the accusation, contradictions in the main elements of the complainant's testimony and lack of internal coherence in the complainant's testimony serve to bring about acquittal. For its part, conviction follows from lack of persistence (facts and contexts) in the accused's testimony; from persistence in the incrimination by the complainant; from consistency in the central elements of the complainant's testimony; from the presence of contradictions in peripheral elements of the complainant's testimony; and from internal coherence in the complainant's testimony. Finally, it is discussed whether legal and empirical criteria, characteristic of forensic psychology, are redundant or complementary.

Key words: *Judicial judgement, validity of evidence, persistence in the incrimination, testimony evaluation, credibility.*

La jurisprudencia (p.e., Sentencia del TS, Sala de lo Penal, de 28 septiembre 1988, RJ 7070) ha definido tres criterios para la estimación de la credibilidad del testimonio en aquellos casos en que no hay otras pruebas indubitativas al margen del testimonio de acusación: la incredibilidad subjetiva, la verosimilitud y la persistencia en la incriminación. En otras palabras, los criterios se relacionan con el estudio de la motivación de la denuncia (incredibilidad subjetiva ante la ausencia de motivación para una denuncia), las corroboraciones periféricas del testimonio del denunciante (verosimilitud) y la validez del testimonio entendida como la consistencia interna y en el tiempo. Con el fin de conocer si los substratos en los que se basa la estimación de la validez del testimonio en la tarea judicial son equiparables o complementarios de los criterios empíricos (es decir, SRA, SVA, GES), tomamos al azar 100 sentencias penales de la base de datos Aranzadi que tuvieran como eje central de la decisión la credibilidad del testimonio por adolecer de otras pruebas directas. Los resultados mostraron que la falta de persistencia en la incriminación se obtiene de la persistencia (hechos y contextos) en la declaración del encausado; la falta de persistencia en la acusación formulada por el denunciante; el cotejo de contradicciones en elementos centrales en el testimonio del denunciante; y la falta de coherencia interna en el testimonio del denunciante, sirven para motivar la absolución. Por su parte, la condena se sigue de la carencia de persistencia (hechos y contextos) en la declaración del acusado; en la persistencia en la acusación formulada por el denunciante; en la observación de consistencia en los elementos centrales de las declaraciones del denunciante; en la presencia de contradicciones en elementos periféricos de las declaraciones del denunciante; y en coherencia interna en el testimonio del denunciante. Por último se discute si los criterios legales y empíricos, propios de la práctica forense, son redundantes o complementarios.

Palabras clave: *sentencia judicial, validez de la prueba, persistencia en la incriminación, evaluación del testimonio, credibilidad.*

While numerous models have been formulated to explain the mechanisms underlying the formation

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of legal judgements, that is, how the information on which inferences are based is processed, *Information Integration Models* (Arce, Fariña & Real, 2000; Kaplan, 1975; Kaplan, 1977; Kaplan & Kemmerick, 1974; Kaplan, Steindorf & Iervolino, 1978; Ostrom, Werner & Saks, 1978) have emerged as the most functional. According to these models, a judgement is an evaluation of a fact or object in one dimension. As such, judgements are based on a set of beliefs about the fact to

be judged, which may be relevant for the dimension of evaluation, and which are salient at the time of the judgement. Examples of beliefs would be inferences about the accused's motives for committing the offence, or those of the complainant for making a false report. Thus, each belief has a weight that influences the evaluation in the judgement dimension. This weight is known as the scalar value of the belief. However, not all beliefs contribute equally to the judgement. Thus, the weight of a piece of information will be related to the reliability and validity of the evidence. Reliability in the courtroom would be affected by elements such as the credibility of the witnesses, the logical consistency of the evidence or the probability of occurrence of a certain structure of events; validity, on the other hand, would be related to the value of the evidence for the judgement to be made. The assignment of credibility (reliability dimension in the model) is based on criteria classified as empirical – those with a scientific basis and which it is assumed are not used by lay people – and social – those used by people in everyday contexts and which do not enjoy scientific support. In the field of the formation of legal judgements, moreover, one can find reference to legal criteria, but the research has shown that judges and magistrates report using criteria which correspond more closely to social evaluation than to empirically-based ones supported by scientific findings (Arce, Fariña & Freire, 2002; Ekman & O'Sullivan, 1994; Piñeiro, 2005; Vrij, 2000). For its part, the validity of the evidence, in accordance with, for example, the Spanish Supreme Court ruling "*Sentencia del TS, Sala de lo Penal, de 28 septiembre 1988, RJ 7070*", rests on the construct *persistence in the incrimination*, it being understood that this must be *prolonged in time and without ambiguities or contradictions, in accordance with classical criteria*. As regards scientific criteria, that is, those with empirical support, three different categorial systems have been developed: Statement Reality Analysis (SRA), Statement Validity Analysis (SVA) and the Global Evaluation System (GES). In SRA (Undeutsch, 1967, 1988), whose field of application is confined to child sexual abuse victims, determination of the validity of evidence is based on the following categories:

- ✓ Lack of internal consistency (contradictions).
 - ✓ Lack of consistency with the laws of nature or science.
 - ✓ Lack of external consistency (discrepancy with other incontrovertible facts).
 - ✓ Lack of persistence (stability in time and contexts).
 - ✓ Testimony inconsistent with previous statements.
- SVA (e.g., Steller, 1989; Steller & Boychuk, 1992;

Steller, Raskin, Yuille & Esplín, 1990), which like SRA focuses on child sexual abuse victims, includes these categories:

- ✓ Appropriateness of language and knowledge.
- ✓ Appropriateness of affect.
- ✓ Susceptibility to suggestion.
- ✓ Coercive, suggestive or leading questions.
- ✓ Overall appropriateness of the interview.
- ✓ Reasons for the complainant's report.
- ✓ Context of the original report or statement.
- ✓ Pressure to present a false report.
- ✓ Consistency with the laws of nature.
- ✓ Consistency with other statements.
- ✓ Consistency with other evidence.

GES (Arce & Fariña, 2005), which is applied to all types of reported offences, includes the categories:

- ✓ (In)sufficient evidence (does it exceed the witness's powers of memory? Does it contain all the information necessary about the facts?).
- ✓ (In)valid evidence:
 - ✓ Internal (in)consistency (are there internal contradictions in the account?).
 - ✓ External (in)consistency (is it consistent with other, robust or incontrovertible evidence?).
 - ✓ Persistence in the statements (are the statements stable with regard to facts and contexts?).
 - ✓ (In)consistency with previous statements (Is there consistency between statements? Do violent events of relevance to the victim appear/disappear?).
 - ✓ (In)consistency with the laws of science and nature (does the account contain facts incompatible with the laws of science or nature?).

With the aim of identifying the underlying bases of the legal criteria for the assignment of validity to testimonies on the part of judges and magistrates, and of comparing them with the case of the empirical criteria defined in the literature, a case study was carried out with judicial rulings in which the decision revolves solely around testimony credibility, to identify the inferential mechanisms on which the judgements are based in conferring validity upon the testimony or subtracting validity from it.

METHOD

Protocols

One hundred criminal judgements were selected at random from Aranzadi's database, in all of which the central pillar of the decision was credibility of the testimony, due to a lack of direct evidence. The original search criterion was "credibility". Having completed this initial search, all those cases that did not contain

“proven facts” were eliminated. It was after this second screening process that the 100 judgements were selected at random from the total. The judgements were pronounced between 1998 and 2007; 18 corresponded to expedited proceedings and 82 to summary proceedings. Ninety-one involved sex offences (24 sexual abuse, 63 sexual assault and 4 rape), 3 attempted murder, 2 unlawful arrest, 1 attempted perversion of justice, 1 coercion, 1 actual or grievous bodily harm, and 1 domestic violence and abuse. In 35 of cases the victims were minors.

Analysis of protocols

The protocols, that is, the judgements, consist of two well-differentiated sections, one referring to the facts and the other to the way they are expressed in legal terms. The way the judgement is framed in legal terms depends totally on the interpretation of the facts. The Spanish judicial-criminal system is organized in such a way that the facts must fit perfectly with the articles of the Penal Code. It might seem initially that the account of the facts would constitute the principal objective of our analysis, but the legal argumentations are also important, since they involve all sorts of inferences.

The aim of the content analysis was to study the *persistence in the incrimination*, one of the credibility criteria employed by judges and magistrates in the formulation of judgements about testimony credibility [Spanish Supreme Court ruling: *Sentencia del TS (Sala de lo Penal), de 28 septiembre 1988, RJ 7070*], and whose definition stipulates that it must be *prolonged in time and without ambiguities or contradictions, in accordance with classical criteria*. In the analysis of the material it was observed that this general category contained sub-categories which guided the interpretation of testimony validity. Consequently, we proceeded to study the material that permitted us to identify different subcategories. The unit of analysis was the judicial judgement. All the categories were coded in terms of whether the presence or absence of the criterion mediated the validity of the testimony (the category was not coded if there was no reference to the criterion, so that the case was filed as “lost”). There follows a description of the sub-categories with examples of each one and, where possible, with one valence that lends robustness to the testimony and another that renders it less valid.

✓ PERSISTENCE IN THE ACCUSED’S TESTIMONY.

This refers to the presence or absence of contradictions between the different statements

made by the accused (persistence in facts and contexts).

- ✓ PERSISTENCE IN THE COMPLAINANT’S TESTIMONY. This refers to the presence or absence of contradictions between the different statements made by the complainant (persistence in facts and contexts).
- ✓ PERSISTENCE IN THE WITNESS’S TESTIMONY: This refers to the presence or absence of contradictions between the different statements made by the witnesses (persistence in facts and contexts). Examples of these categories are:
 - ✓ *His/Her version does not coincide at all with what was said in court.*
 - ✓ *He/She lied initially and told the truth once discovered.*
 - ✓ *At the trial the accused stated that the version presented was that which he/she had always maintained, when in fact, for example, during the previous proceedings he/she had produced as many as three different versions.*
 - ✓ *There are no substantial contradictions or distortions.*
 - ✓ *The versions coincide and are not contradictory.*
 - ✓ *Circumstances and details that concur, with no variation whatsoever.*
 - ✓ *The version is coherent and coincides with the previous ones, with no lack of credibility.*
- ✓ CONTRADICTIONS THAT AFFECT THE CORE OF THE ACCUSED’S TESTIMONY. This refers to the presence or absence of contradictions between the different statements made by the accused, but specifically in relation to core elements of their statement.
- ✓ CONTRADICTIONS THAT AFFECT THE CORE OF THE COMPLAINANT’S TESTIMONY. This refers to the presence or absence of contradictions between the different statements made by the complainant, but specifically in relation to core elements of their statement.
- ✓ CONTRADICTIONS THAT AFFECT THE CORE OF THE WITNESS’S TESTIMONY: This refers to the presence or absence of contradictions between the different statements made by the witness, but specifically in relation to core elements of their statement. Examples of these categories are:
 - ✓ *Variation of information that is unmistakably and essentially characteristic of an assault.*
 - ✓ *Contradictions that involve more than simple and reasonable nuances or details attributable to the*

difficulty of retaining an exact memory of the facts over time.

- ✓ *Substantially coincident.*
- ✓ *It is essentially an account coherent with previous statements, which is sufficient to serve as corroboration for the victim.*
- ✓ *Although the victim does indeed make some contradictions, these do not affect essential aspects related to the judgement.*
- ✓ **CONTRADICTIONS THAT AFFECT PERIPHERAL ELEMENTS OF THE ACCUSED'S TESTIMONY.** This refers to the presence or absence of contradictions between the different statements made by the accused, but specifically in relation to peripheral elements of their statement.
- ✓ **CONTRADICTIONS THAT AFFECT PERIPHERAL ELEMENTS OF THE COMPLAINANT'S TESTIMONY.** This refers to the presence or absence of contradictions between the different statements made by the complainant, but specifically in relation to peripheral elements of their statement.
- ✓ **CONTRADICTIONS THAT AFFECT PERIPHERAL ELEMENTS OF THE WITNESS'S TESTIMONY.** This refers to the presence or absence of contradictions between the different statements made by the witness, but specifically in relation to peripheral elements of their statement. Examples of these categories are:
 - ✓ *Mere imprecision in details.*
 - ✓ *There are contradictions affecting some peripheral aspects, but these do not suggest false testimony by the victim.*
 - ✓ *Contradictions which in the Court's opinion are not serious enough or central enough to render totally invalid the victim's testimony: what is most important about their testimony is the fact itself... the contradictions are accidental.*
 - ✓ *The contradictions are not sufficient for it to be deduced from them that all the rest of the account is false, since these do not refer to essential elements characteristic of the act in question.*
- ✓ **THE ACCUSED CONTRIBUTES NEW DATA.** This new information affects the essence of the account. The new data added by the accused to his/her previous statement either complements it or changes its meaning.
- ✓ **THE COMPLAINANT CONTRIBUTES NEW DATA.** This new information affects the essence of the account. The new data added by the complainant to his/her previous statement either complements it or changes its meaning.

- ✓ **THE WITNESS CONTRIBUTES NEW DATA.** This new information affects the essence of the account. The new data added by the witness to his/her previous statement either complements it or changes its meaning. Examples are:
 - ✓ *Inconsistent and contradictory statement, even involving the introduction of new facts during the court case.*
 - ✓ *Cannot be considered contradictory, only complementary.*
 - ✓ *Concordant complementary details are given, conferring credibility on the account.*
- ✓ **COHERENCE IN THE ACCUSED'S TESTIMONY.** The facts reported by the accused form a coherent line.
- ✓ **COHERENCE IN THE COMPLAINANT'S TESTIMONY.** The facts reported by the complainant form a coherent line.
- ✓ **COHERENCIA IN THE WITNESS'S TESTIMONY.** The facts reported by the witness form a coherent line.

Examples are:

- ✓ *Lack of coherence.*
- ✓ *Reluctance to reply and/or use of monosyllables, making it impossible to obtain an account with any coherence.*
- ✓ *Maintained the same version during the investigative proceedings prior to the trial... providing coherent information.*
- ✓ *Uniformity and coherence.*
- ✓ *Coherent version... with no chinks.*

Training of coders

One coder analyzed all the protocols for the categories, a second coder providing a contrast analysis for the persistence in the incrimination criteria. The coders participating in this study were comprehensively trained, being provided with examples of each analysis category using concordance as an element of contrast in the training, with a view to correcting coding biases. Previously, one of them had already worked on the coding of judicial judgements (e.g., Fariña, Arce & Novo, 2002), whilst the other had experience in the coding of credibility criteria in forensic practice.

Reliability

A trained and experienced coder analyzed all the protocols for the categories making up the persistence in the incrimination together with the valence assigned to the criterion (favourable, unfavourable or neutral for the accused). After a time lapse of at least one week

from completion of the coding, the same person coded 10% of the protocols. A second coder analyzed 20% of the protocols with a view to testing inter-coder consistency. Reliability, whose indices can be seen in Table 1, was computed by means of the Concordance Index.

All evaluations scoring higher than the cut-off point of 80%, which refers to concordance, are deemed consistent (Tversky, 1977). Thus, it can be considered that the evaluations in relation to heuristic strategies are consistent. Moreover, consistency is found both inter- and intra-coder – that is, both between coders and over time.

Furthermore, in pursuit of establishing the reliability beyond the instruments themselves, it is also noteworthy that they emerged as reliable, effective and valid in other forensic and scientific studies with other coders (e.g., Fariña, Arce & Novo, 2002). Thus, considering this inter-participant, inter-study and inter-method

consistency, it can be stated that the measures are highly reliable (Wicker, 1975).

Results

Persistence in the incrimination, which is a criterion relevant to the judicial process in all cases, is not related to the judgement, $\chi^2(1;n=100)=0$; ns; $\phi=-.026$. Given that there is no totally systematic relationship between persistence in the incrimination and the judgement, it was pertinent to analyze the sub-categories making up persistence in the incrimination, with a view to identifying their prevalence and direction in relation to the judgement.

As can be inferred from the results presented in Table 2, the sub-categories “persistence in the accused’s testimony”, “persistence in the complainant’s testimony”, “contradictions in central elements of the complainant’s testimony”, “peripheral contradictions by the complainant” and “coherence of the complainant’s testimony” are the significant referents of the legal category “persistence in the incrimination”. Consequently, let us proceed to analyze these in detail.

Persistence in the accused’s testimony

The results reveal that the observation of lack of persistence (facts and contexts) in the accused’s testimony implies a guilty judgement (83.3%), whilst persistence is related to acquittal (87.5%), $\chi^2(1;n=20)=7.08$; $p<.01$; $\phi=.572$. It should be stressed, however, that in the present study a lack of persistence in the accused’s testimony does not lead inevitably to a guilty judgement, since it was found that 16.7% of cases in which the summarizing judge or magistrate referred to general inconsistencies in the accused’s testimony ended in acquittal. In turn, and as is to be expected, the finding of consistency in the accused’s testimony does not invariably imply acquittal: despite the recognition of a consistent testimony, a guilty judgement was returned in 12.5% of cases.

Persistence in the complainant’s testimony.

The results reveal that an observed lack of persistence (facts and contexts) in the complainant’s testimony is related to an acquittal judgement in 72.4% of cases, and persistence in the incrimination to a guilty judgement in 80% of cases, a difference which was statistically significant $\chi^2(1;n=59)=14.28$; $p<.001$; $\phi=.465$. Even so, in 27.6% of cases in which lack of persistence in the complainant’s testimony was observed, a guilty judgement was returned.

Table 1

Intra- and inter-coder reliability in the coding of credibility criteria and valence

Criteria of persistence in the incrimination	Intra-coder	Inter-coder
Persistence in the accused’s testimony	1	1
Persistence in the complainant’s testimony	1	1
Persistence in witnesses’ testimony	1	.8
Core contradictions by the accused	1	1
Core contradictions by the complainant	1	1
Core contradictions by witnesses	1	1
Peripheral contradictions by the accused	1	1
Peripheral contradictions by the complainant	.9	1
Peripheral contradictions by witnesses	1	.85

Table 2

Sub-categories of the general criterion persistence in the incrimination

Sub-categories	Frequency	Z	p
Persistence in the accused’s testimony	20	6.88	.001
Persistence in the complainant’s testimony	59	24.77	.001
Persistence in witnesses’ testimony	5	---	---
Core contradictions by the accused	1	---	---
Core contradictions by the complainant	14	4.12	.001
Core contradictions by witnesses	1	---	---
Peripheral contradictions by the accused	0	---	---
Peripheral contradictions by the complainant	13	3.66	.001
Peripheral contradictions by witnesses	0	---	---
New data from the accused	1	---	---
New data from the complainant	2	---	---
New data from witnesses	0	---	---
Coherence of the accused’s testimony	2	---	---
Coherence of the complainant’s testimony	21	7.33	.001
Coherence of witnesses’ testimony	0	---	---

Note: Contrast value of .05, which is the statistical significance concept.

Contradictions in core elements of the complainant's testimony

Of the judgements in which there was explicit mention of contradictions in central elements of the complainant's testimony in relation to proven facts or legal foundations, 80% concluded with the accused's acquittal, whilst in those cases in which the absence of contradictions was reported, 88.9% ended in a guilty judgement, this difference being statistically significant, $\chi^2(1;n=14)=3.98$; $p<.05$; $\phi=.567$. In relation to the design of strategies for legal professionals and scientists working in testimony credibility, it is worthy of note that judges and magistrates may reach a guilty judgement despite having observed contradictions in central elements of the complainant's testimony (20%).

Contradictions in peripheral elements of the complainant's testimony

In this category only the presence of such contradictions was recorded, that is, the absence of peripheral contradictions is not a criterion of verisimilitude. For its part, their presence, $\chi^2(1;n=13)=3.8$; $p<.05$, is related in a significant fashion to guilty judgement (76.9%).

Internal coherence of the complainant's testimony

The results show that the absence of internal coherence in the complainant's testimony inevitably implies an acquittal (100% of cases), whilst a coherent testimony tends to lead to a guilty judgement (83.3%), $\chi^2(1;n=21)=5.14$; $p<.05$; $\phi=.542$.

DISCUSSION

The following conclusions can be drawn from the above results:

- a) *In relation to acquittal.* Acquittal of the accused follows from persistence (facts and contexts) in the accused's testimony; lack of persistence in the accusation by the complainant; contradictions in core elements of the complainant's testimony; and lack of internal coherence in the complainant's testimony.
- b) *In relation to a guilty judgement.* Guilty judgements, on the other hand, are based on lack of persistence (facts and contexts) in the accused's testimony; on persistence in the accusation by the complainant; on the observation of consistency in core elements of the complainant's testimony; on the presence of contradictions in peripheral elements of the complainant's testimony; and on internal coherence in the complainant's testimony.
- c) *In relation to validity of the evidence.* The most

widely used empirical systems for evaluating testimony credibility [Statement Reality Analysis (Undeutsch, 1967); Statement Validity Analysis (Steller & Boychuck, 1992); Criteria Based Content Analysis (Steller & Köhnken, 1994), and the Global Evaluation System (Arce & Fariña, 2006)] start out from an evaluation of the validity of the evidence. Likewise, in the judicial assessment we find that judges and magistrates follow this same procedure. To this end they employ a study of motivation like those of Statement Validity Analysis (SVA) and the Global Evaluation System (GES), and of the actual validity of the evidence by means of the analysis of its persistence in time, internal consistency, consistency with other robust or incontrovertible evidence, and consistency in central and peripheral information, in a way comparable to the procedure followed in GES. However, the form in which statements are obtained, cross-examination, largely reduces the effectiveness of the validity study. In comparison to the case of GES, which is the psychological tool that analyzes in most detail the validity of the evidence, judges and magistrates fail to include an analysis of the sufficiency of the evidence. In any case, it can be concluded that, in relation to the evaluation of testimony validity, the work of judges and magistrates, on the one hand, and that of forensic psychologists, on the other, is complementary.

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