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The Meaning of Atypical Evidence in Civil Procedure

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Abstract

This paper analyzes the doctrine that was most interested in the issue of atypical evidence in civil proceedings, which seemed to deviate from the legal discipline of the investigation of evidence. The doctrine in favour of the general admissibility of atypical evidence is essentially based on the belief that it aims at determining the material truth. In the first part of this paper, we will make an efficient analysis of this particular category of evidence, it is necessary to define it, because only by knowing what will be considered atypical evidence can we identify the problems that characterize paternity and distinguish it from illegal evidence. The second part focuses on the evolution of the doctrine and practice in favour of the general admissibility of atypical evidence formed and obtained in the judicial process, the third part is related to the admission as evidence of civil or criminal decisions, the trial developed between the same or different parties. The fourth part will address the writings and statements coming from third parties and litigants that are presented as evidence in the trial. Conclusion Human society is characterized by dynamism and evolution. Social relations undergo constant changes, both qualitatively and quantitatively. Legislation must always adapt to these changes, and legislate them.

Keywords: atipical evidence, the evolution of the doctrine, trial. the fact

Introduction

During the judicial review before the court, evidence may be presented that is decisive for the resolution of the issue, but that neither the source nor the modality is provided for in the law. In legal doctrine, such evidence has been baptized with the term "atypical evidence". Such a term is in accordance with the principles of taxability and typification of evidence, in the spirit of which the legal institute of evidence is built. This is a hypothetical indication, but with theoretical and practical value, which deserves great attention, since its clear meaning makes it possible to respect the subjective rights of the subjects to whom they belong. Before addressing the meaning

of atypical evidence, we are presenting a brief exposition of the general meaning of evidence and introducing some elements related to it. The Code of Civil Procedure leaves no room for debate regarding the meaning of evidence as it itself provides such a definition: "Evidence is data obtained in the form specified in the Code of Civil Procedure and which serves to prove or refute the claims or objections of the parties or other participants in the process." This definition means the performance of all actions by the court and the parties, in order to prove or disprove a fact alleged by the parties in the judicial process. This activity includes: the presentation of evidence, the proposal of the parties to take evidence, the decision of the court on which evidence will be taken, the presentation of evidence by the parties, their taking by the court when the party is unable to provide them and the evaluation of evidence.

In the judicial process, the court must require the parties to present evidence for any fact on which the development of the process or the taking of any decision during this process depends. In order to carry out an efficient analysis of this particular category of evidence, it is necessary to provide a definition regarding them, because only by knowing what will be considered atypical evidence can we identify the problems that characterize them and be able to determine the way to use them in accordance with the principle of constitutionality and legality, which in themselves constitute the fundamental principles of our Albanian system. We can say that atypical evidence is evidence “different” from the legal models provided for by civil procedural legislation. It is also important and even necessary to examine this concept in more depth, and for this we are helped by the definitions made by various authors. Thus, Michele Taruffo emphasizes that “atypical” has as a reference point both the means of evidence, which is not included in the “codistic catalog”, and the possible way of acquiring the means of investigation, which are different from those of the legal model[1]. While Tarzia, another important author in the Italian legal sphere, divides atypical evidence into three categories:

A- New evidence established as a result of scientific progress

B- Evidence tending to replace those in force and provided for in the code

C- Evidence collected in “another” process

It is also important to highlight the distinction proposed by Michele Taruffo, according to which, in relation to atypical evidence, we distinguish: (a) atypical evidence, the source of which, which makes it such, is not disciplined by the legal system and (b) atypical evidence, the modality of which, the element that gives the evidence the "atypical" quality, is undisciplined by the legal system. The modality is an element (procedure) by which the receipt, possession of the evidence is made possible. However, Taruffo, although he distinguishes between these typologies of atypical evidence, considers both to be admissible for civil proceedings, an opinion which is not supported by the arguments provided by legal doctrine. One of the authors representing this doctrinal current is Montesano who rejects the “atypical”, the

procedure for obtaining evidence which is not provided for in the law, because if it were accepted, according to him, it would mean allowing the judge to use his own private knowledge to construct facts. This prohibition, also provided for by Italian civil procedural legislation, sanctions that evidence or means of proof will only be that which has been obtained according to a procedure established by law, therefore "atypical" refers to the source of the evidence and not the modality of obtaining the evidence.

The concept of atypicality, even if it refers only to the source of evidence, includes such heterogeneous typologies that it is difficult to create a unity, both for the different nature that characterizes them and for the different efficiency.

The evolution of the concept of evidence and atypical evidence, their probative value. The difference between atypical evidence and illegal evidence.

Therefore, approached the study of the doctrine that was most interested in the issue of evidence in civil proceedings, in the hope of finding a convincing dogmatic basis that would still bring back into the fold of the system the positions of tautological openness of jurisprudence, which in fact seemed to me to deviate from the legal discipline of evidentiary investigation. In fact, the concern that by admitting that the judge can use elements for the ascertainment of the factum probandum other than those foreseen and regulated by our legislator, atypical both with respect to the sources of conviction and with respect to the way in which such sources are formed and acquired at trial, we run the risk of reducing the normative models of the various evidentiary procedures to a " corpus of paternal suggestions provided by the legislator to lawyers and judges on the most effective and best tested methods by tradition for proving and ascertaining the controversial facts in court".

The doctrine in favor of a general admissibility of atypical evidence is fundamentally based on the belief that, given the so-called epistemic function of the process, aimed at ascertaining the material truth, any limitation of the evidence results in a violation of the judge's ability to access the fact, and therefore, outside of the rules of exclusion expressly provided for by the legislator (e.g. the hearsay rule, the rules of privilege of written evidence of contracts, incapacity to testify), the criterion of relevance should constitute the only filter for the use of evidence in the process, according to the principle specific to common law systems "all facts having rational probative value are admissible, unless some specific rule forbids" .In other words, the fundamental rule, to be applied with logical priority, is "the one that derives the admissibility of evidence from its relevance; the exceptions to this rule are constituted by the norms that foresee the inadmissibility of relevant evidence[2].

It is argued that the notion of proof belongs to the sphere of logic and, therefore, the discipline of evidentiary instruction does not exhaust the notion of proof, but serves only to exclude the admissibility of certain means of proof when there are particular reasons for exclusion which also have, for the most part, an epistemic function in

order to be aimed at preventing or avoiding errors of evaluation by the subject or the body which must formulate the final decision on the facts.

Ultimately, according to the doctrinal orientation succinctly exposed and shared by the absolutely majority of jurisprudence, any empirical data useful for ascertaining the fact is proof and not only that foreseen and regulated as such by the legislator. However, studying the reasons of the positivist doctrine, and in the light of an overall consideration of the positions taken by the case law of legitimacy on questions strictly connected to the issue of the admissibility and evaluation of evidence in civil proceedings, it seems to me that I can reach the conclusion that the risks connected to the indiscriminate admission of atypical evidence in the proceedings far outweigh the benefits achievable in terms of maximizing the possibilities of ascertaining the fact and valorizing the principle of free conviction of the judge and, indeed, paradoxically end up undermining both.

Proceeding in order, I believe that the approach to the problem of atypical evidence in terms of the exhaustiveness or exemplification of the legal repertoire of evidence is devoid of practical utility.

Let us consider that our civil code, as has been well said, aligns "in the manner of homogeneous entities elements which evidently belong to different logical and semantic levels"[3]**.** when it speaks (in the title of the various chapters of title II of the sixth book) of documentary evidence, testimonial evidence, presumptions (legal and simple), confession (judicial and extrajudicial) and oath (decisive and supplementary), "the resulting catalogue includes material things pre-existing to the trial (documents), declarations made in the trial (testimony, judicial confession, oath), declarations made outside the trial and therefore in turn requiring proof (extrajudicial confession), legal mechanisms for the distribution of the burden of proof (praesumptiones iuris), and finally the description of inferential reasoning (praesumptio hominis)" [4] In Albania we cannot talk about historical aspects of atypical evidence, since it is still an institute that has been treated very little. Consequently, in the treatment of historical aspects we can refer to other countries, and in particular the Italian doctrine. The foreign procedural doctrine formed, previously, in its beginnings, aimed to treat the possible problems of atypical evidence, although it did not treat it as a separate legal institute, but as elements capable of integrating the judge's conviction with the truth, as well as data that are actually abnormal compared to the taxing list of means of evidence that the parties had at their disposal to "fight" in the judicial arena. In this sense, atypical evidence was considered as elements of conviction to resolve another dispute, different from the one taken as a point of reference The Code of Civil Procedure, in terms of the process of proof, lists a number of means of proof that can be used in civil proceedings. Specifically, as means of proof provided for by the civil procedural law, we can mention the explanations of the parties, their statements, testimony, expertise, documentary evidence, which includes written evidence with its subdivisions,

examination and experiment. However, it should be noted that the Code of Civil Procedure has not sanctioned the principle of typicality of means of proof. Consequently, the provision of means of proof made by the Code of Civil Procedure should not be considered a closed and exhaustive system, in the sense that, in the absence of an express legal prohibition, for the purpose of the process of proof, and of rendering a decision on the case, any data resulting from other means that are not expressly provided for and regulated as means of proof by both the Code of Civil Procedure and other laws may be used as evidence. In this regard, we can identify atypical evidence, which, unlike typical evidence, are those data resulting from evidence that are not expressly provided for and regulated as evidence by the Code of Civil Procedure or other laws, where is atypical evidence we can mention evidence obtained and formed in other judicial processes, written statements of third parties not participating in the process, extrajudicial expertise, documents containing statements made by the party itself and presented by it in the trial. The Code of Civil Procedure does not express itself regarding atypical evidence, unlike the Code of Criminal Procedure, which in its article 151/3 provides that: "when evidence is requested that is not regulated by law, the court may take it if it is valid for proving the facts and does not violate the freedom of the person's will. The court decides on the taking of evidence after hearing the parties on the manner of taking it". However, atypical evidence, based on the principle of unity of judgment, may be allowed to be used in civil proceedings, just as it is allowed to be used in criminal proceedings, "since the use of such evidence is reasonably justified rather than its non-use". [5]Consequently, as long as the Code of Civil Procedure lacks a provision that exhaustively closes the typology of evidence, the court examining the case may form its internal conviction based on atypical evidence The provision of Article 116, paragraph 2, of the Code of Civil Procedure gives the court trying the case a wide discretionary power over the evaluation of evidence, and in this respect it may form its conviction based also on atypical or unnominated evidence since its use is reasonably justified and not on the contrary its non-use. on the condition that they reflect important data for the trial which are consistent, supported and harmonized with the other circumstances of the case. [6]

The meaning and usability of atypical evidence both in civil judicial proceedings and in administrative judicial proceedings has been defined and accepted by the judicial practice of the Supreme Court of the Republic of Albania, which has used, among others, the Italian legal doctrine and the judicial practice of the Supreme Court of Cassation of the Republic of Italy as sources of its evaluation and positions on them. [7]The presentation and request for the collection of atypical evidence, as well as typical evidence, must be carried out on the basis of general procedural rules on the presentation and request for the collection of evidence, rules that guarantee the constitutional right to a fair legal process and that impose that the parties in the process be treated equally by being placed in the same procedural positions that enable the presentation of the findings and their defense. The Supreme Court of the

Republic of Albania in its judicial practice has assessed that "the legal rules applicable to the corresponding typical evidence will be applied to atypical evidence, even through the interpretation of these norms by analogy" [8]

Implying that the probative value of this evidence is the same as that of the typical evidence that is corresponding in form and content to the atypical evidence itself. Meanwhile, the Supreme Court of Cassation of the Republic of Italy in its judicial practice has recognized the probative value of simple indications (indirect evidence) to atypical evidence, but there have also been cases where such evidence has also been recognized as having the probative value of decisive evidence for resolving the case. [9] I believe that the most correct position is that atypical evidence should in principle be given the probative value of indicia and not that of equating their probative value with the probative value of typical evidence that is corresponding in form and content to the atypical evidence itself. This is due to the fact that typical evidence that is created during the trial, such as testimony, acquires probative value when taken under oath and during an adversarial trial in the framework of which the court and the parties have the right and opportunity to ask questions of the witness, which does not happen in the case of an atypical evidence that in its content reflects the statements of a witness. The same can be said for an expert report conducted by an expert under oath and debated in an adversarial trial, in contrast to what happens with atypical evidence that in its content reflects an extrajudicial expert report, or even an expert report conducted within the framework of another process, both civil and criminal. Illegal evidence must be distinguished from atypical evidence, a distinction that has been made and recognized by the judicial practice of the Supreme Court of the Republic of Albania, "where the former atypical evidence is evidence not provided for by law, but the source of their formation is not in itself illegal. While the latter is evidence provided for by law, but obtained in violation of the limits set by the norms of substantive or procedural law. Evidence created by criminally punishable means or in violation of constitutional rights and freedoms may be illegal. Such may be evidence that has been obtained according to an irregular and illegal procedure (e.g. recordings in violation of privacy, etc.)"... The College assesses that a distinction must be made between atypical evidence and illegal evidence. The former are evidence not provided for by law, but the source of their formation is not in itself illegal. While the second is evidence provided by law, but obtained in violation of the limits set by the norms of substantive or procedural law. Evidence created by criminally punishable means or in violation of constitutional rights and freedoms may be illegal. Such may be evidence which ex se has been obtained according to an irregular and illegal procedure (e.g. recordings in violation of privacy, etc.) [10]

The evidentiary value of atypical evidence formed in other judicial proceedings.

The category of atypical evidence that belongs to evidence obtained and formed in other judicial proceedings includes any evidentiary material obtained and formed during other civil or criminal proceedings, where other civil proceedings may be civil

proceedings conducted between the same parties or at least against one of the subjects of the trial in question, while criminal proceedings may be criminal proceedings during which facts and data have been proven, the verification of which depends on the existence and acceptance of a subjective civil legal right. The presentation and request for the receipt of atypical evidence obtained and formed in other judicial proceedings may also arise from the circumstance that the typical evidence corresponding to the object of the evidence objectively can no longer be taken, that is, if there are insurmountable difficulties or obstacles to taking the typical evidence anew. Articles 29 and 309 of the Code of Civil Procedure recognize and grant the court trying the case freedom in assessing the evidence. In this regard, in the absence of express legal prohibitions, based also on the principle of unity of judgment, the court may form its conviction also on the basis of evidence taken in another judicial process, with the precondition that this evidence has previously been subjected to a full judicial debate. Atypical evidence taken and formed in other judicial processes can be of various types, one of which is evidence with witnesses, taken in another trial and between other parties. In relation to this evidence, we must distinguish between two different pieces of evidence, the evidence itself with witnesses from the court session minutes of other trials in which the testimony statements are reflected, where "the first is evidence given orally, while the second is atypical written evidence, which is left to the free assessment of the court" '....The evidence with witnesses and the production of the court session minutes of other trials in which the testimony depositions are reflected constitute two different pieces of evidence: the first is evidence given orally, the second is atypical written evidence, which is left to the careful assessment of the court[11]As atypical evidence obtained and formed in other judicial processes, technical expertises conducted during another process, both civil and criminal, may also be considered, when, moreover, these technical expertises have had as their object a factual situation that is important in both trials, where the court examining the civil case may use them in the function of rendering its decision by freely evaluating both the facts and the assessments, judgments, and conclusions included in these acts of technical expertise." .... The court examining the merits of the case may use, in the absence of any legal obstacle, the evidence obtained in a different process between other parties, as any other evidentiary submission of the same parties, in order to derive not only indications or elements of its conviction, but also to give them the value of decisive evidence, which also applies to an act of expertise performed during a criminal process or an act of expertise performed in other civil trials." [12] Even statements made in the context of a criminal trial or proceeding can be used as atypical evidence in a civil trial, evidence which is also subject to the free assessment of the court examining the civil case. "....The statements made by the defendant before the judicial police officer, in the context of the criminal proceedings, must be qualified as extrajudicial statements. The source of their formation is not illegal, since they were made before a public official in the exercise of his legal duties. The acts of the criminal file and also the prosecutor's

decision not to initiate criminal proceedings, where the defendant's extrajudicial statements are recorded, in the civil trial, are admissible as documentary evidence. In the specific case, we are faced with evidence with mixed elements, of documentary evidence in form and extrajudicial statement in content. Both of these are typical sources of evidence provided for in the CPC. The documents where the extrajudicial statements of the defendant in the specific case are recorded, according to Articles 253 and 254 of the CPC, have full evidentiary power regarding the manner in which it was stated before the criminal proceeding bodies, but not regarding the content of the statement, which is subject to the free assessment of the court…."[13] Evidence obtained and formed in other judicial processes may also serve as atypical evidence obtained and formed in a dismissed civil or criminal trial. The use of evidence obtained and formed in a dismissed civil trial, when the plaintiff re-files the same lawsuit, is also accepted by Article 300 of the Code of Civil Procedure, which provides that "the dismissal of the trial entails the annulment of all procedural actions, including the decisions issued during the trial, but in the event that the plaintiff re-files the same lawsuit, the evidence collected in the dismissed trial may be taken into account in the trial of this lawsuit, if there are insurmountable difficulties or obstacles to their re-admission". However, even in this case, the court examining the case enjoys full discretion in allowing the receipt and administration of this evidence. In relation to the evidence obtained and formed in a discontinued criminal trial, this evidence will take on importance for the court trying the civil case in the case where the criminal trial has been discontinued for reasons that do not refer to the circumstance that "the fact does not exist", this evidence will be subject to the free assessment of the court examining the civil case, without this court being bound by the assessment made of this evidence by the criminal proceeding body."…… Outside and beyond evidence with full probative force, there does not exist in our legal order a hierarchy of evidence, the evidentiary results of some of which must necessarily prevail over the evidentiary results of others, because the assessment of the evidence is left to the careful assessment of the court. Furthermore, it follows from the above that the court may use as a source of its conviction also evidence obtained in a different process between the same or other parties and therefore also evidence obtained in a criminal trial (even though this criminal trial may have been discontinued due to amnesty or other causes that extinguish the criminal offense) by directly examining their content or by extracting them from the criminal decision or from the acts of the criminal trial and by applying the relevant assessment with a broad discretionary power, without being obliged….." from the assessment made by the criminal court[14].

The third part is related to the admission as evidence of civil or criminal decisions

Also, the court examining the civil case, in order to render its decision, may use and utilize the evidence and data collected by the prosecutor in the preliminary investigation phase, both in cases where the suspension of the investigation has been

decided because the perpetrators of the criminal offense have not been found, and when it has been decided not to initiate criminal proceedings because the fact is not provided for by law as a criminal offense. This evidence is also subject to the free assessment of the court examining the civil case, which is not bound by the legal qualifications and conclusions reached on them by the prosecutor. "……Both the court of first instance and the court of appeal have not analyzed and have not assessed as evidence the Decision of the Prosecutor's Office no. 328, dated 20.10.2003, where it is established that the criminal fact of falsification of documents exists in the form of intellectual forgery, but the investigations have been suspended because the perpetrators of the criminal act have not been found.... The Panel assesses that the prosecutor's decision in the specific case neither has a predetermined value, nor can it be excluded a priori.... The Panel assesses that the prosecutor's decision, which has concluded on the falsity of the document, constitutes complete proof of the actions committed by him, of the actions committed by third parties before him, of the statements of third parties (not the truth of their content), of the facts that occurred before him, which fall within the functional competence of his activity. The prosecutor's logical deduction that the document is forged does not constitute complete proof and is certainly not binding on the court examining the civil case, but the data collected by him up to that stage of the investigation will have to be analyzed by the civil court, which may reach the same or a different conclusion. The Panel would like to emphasize that the statements of third parties before the prosecutor, (specifically the statements of the employee of the Durrës Real Estate Registration Office) taken out of court, who could potentially have been called as witnesses in the trial, do not have the value of evidence, but will be considered as atypical evidence (in the form of quasi-evidence) when assessed by the courts. [15]. In article 451/a of the Code of Civil Procedure which provides that "a decision that has become final is binding on the parties, on their heirs, on persons who deprive the parties of rights, on the court that issued the decision and on all other courts and institutions. A decision that has become final is valid only for what was decided between the same parties, for the same object and for the same cause. A conflict that has been resolved by a final decision cannot be tried again, unless the law provides otherwise". Consequently, whenever a final and final civil court decision is presented as evidence in a civil trial, through which the principle of res judicata is claimed and invoked as defined in Article 451/a of the Code of Civil Procedure, the court examining the case must limit itself only to establishing the objective and subjective limits of the binding force of such a decision, since the authority of res judicata and its limits prevent the development of a new trial on the same civil dispute. If the court, in contradiction with the objective and subjective limits of the binding force of the final and final civil court decision, re-judges the civil dispute subject to thejudgment decided by a final civil court decision of final form, it violates the principle of res judicata and at the same time the principle of legal certainty, a principle which "dictates that when a civil dispute has been examined on its merits by the court, it must be decided once and for all and the court's

decision must not be questioned" [16]. Where is when a final civil decision of final form does not constitute a res judicata according to the meaning and limits of the binding power provided for in Article 451/a of the Code of Civil Procedure, and the court, in violation of these limits of binding force, decides not to judge the merits of the claims raised before it, considering the case as res judicata, it will violate the fundamental right of access to court provided for in Article 42 of the Constitution. [16]

Written evidence and statements coming from third parties.

The Code of Civil Procedure, through its articles 259 and 267, has foreseen and regulated as one of the typical means of evidence, the simple private document issued by the litigant but brought as evidence in the trial by its counterparty, for which it also determines the conditions when the simple private document constitutes complete evidence regarding the fact that the statements contained therein are those of the person who signed the document. Consequently, documents and statements coming from third parties not participating in the process cannot have the same evidentiary value as the simple private document issued by the litigant himself, even if the authenticity of their signature is not questioned. Also, statements included in a document made by third parties, cannot be introduced into the trial in the procedural capacity of witness evidence, since these statements were not given under oath in the context of a contradictory trial, and therefore they do not have the effect of witness evidence. Likewise, statements coming from third parties not participating in the process, in terms of their internal truthfulness (the internal side of the content of the statements), cannot constitute evidence with full probative force, even if they are contained and included in a public act, referring to the limits of the probative force of these acts, determined by Article 253 of the Code of Civil Procedure. However, referring to the broad meaning given to private documents by Article 246 of the Code of Civil Procedure, documents and statements coming from third parties not participating in the process as atypical evidence can be used in civil proceedings subject to the free assessment of the court examining the case, and "in conjunction with other circumstances arising from the very nature of the dispute, they may create useful elements for forming the court's conviction, especially if their formal authenticity has been proven for these documents (e.g. if the signature of these documents has been certified as original by a public official)". A document coming from a third person presented in the trial by one of the parties, although it cannot be configured as typical evidence, may constitute an indication, the importance of which must be assessed together with the procedural conduct maintained by the other party during the trial of the merits. However, in the absence of objection from the party against whom the document is presented, such documents may be recognized as having the value of evidence capable of forming an argument for the court's conviction, and in competition with other elements supporting its credibility and admissibility, may be placed at the basis of its decision. [18] The Code of Civil Procedure in its article 262 provides that "a private document constitutes evidence in

favor of the compiler only if it is presented by the opposing party or if it concerns the books mentioned in article 260". Referring to article 260 of the Code of Civil Procedure, this provision provides that "private documents are also called: - the books of merchants and professionals who keep them according to the Commercial Code or other provisions; - the books of lawyers, notaries, bailiffs, doctors, pharmacists and other professions, according to the provisions in force. When parts of the book or the whole are presented as evidence and also contain data that are not related to the subject of the trial, those parts of the document that are related to it may be taken". Based on the above-mentioned procedural provisions, it results that both ordinary private documents and private documents subject to special regimes can constitute evidence in favor of their compiler, but in this case, the Code of Civil Procedure has conditioned their being typical evidence in favor of their compiler, with the fact and circumstance that they have been presented in the trial as evidence only by the opposing party. Such conditioning is intended to avoid the use as typical evidence of private documents presented by their compiler itself, which contain favorable statements on facts on which the declarant himself bases his claim in the trial. This is because otherwise, allowing the use of these documents submitted by their compiler as typical evidence would not only nullify the rule of the burden of proof itself, sanctioned in Article 12 of the Code of Civil Procedure, but would also contradict the principle that "no one can form evidence in his favor", a principle which has also been accepted by Albanian judicial practice. Also, based on both the rule of the burden of proof and the aforementioned principle, statements made by the party himself before a notary and brought by the party himself to trial will not constitute typical evidence, these statements, the internal truthfulness of which does not constitute evidence with full probative force, even with reference to the full probative force of an official act, provided for by Article 253 of the Code of Civil Procedure. It should be noted that the Supreme Court of Cassation of the Republic of Italy, based on the principle that "no one can form evidence in his favor", in its judicial practice, did not recognize the quality of evidence with full probative force, even of those public acts which, compiled by a state official or a person exercising public activity, were brought as evidence by them in the trial in which they are litigants. The Supreme Court of Cassation of the Republic of Italy has recognized the value of all these documents and statements coming from the litigant himself and presented by him as evidence in the trial, which the court assesses in harmony with the other evidentiary elements... "The notes included in a clinical file are referable in a judicial review only with regard to the activity carried out during a therapy or during a medical intervention, while the assessments, diagnoses or any manifestation of science or opinion included in them have no privileged evidentiary value in relation to the other elements of evidence; in any case, the notes of the clinical file when they relate to facts that occurred in the presence of a public official or carried out by him (and not the assessment of such facts) do not constitute evidence with full evidentiary force in favor of the one who edited them, based on the principle according to which no one

can create evidence in his favor[19] In this regard ".... Administrative certificates cannot constitute evidence with full probative force in favor of the public administration itself from which they derive, which it intends to use as evidence in a case, they may nevertheless take on the value of indications and form the conviction of the court in harmony with other evidentiary elements..." [20] Even in French legal doctrine it is accepted that: "the principle that no one can constitute evidence for himself" does not absolutely exclude an element of evidence that nevertheless constitutes an indication, which will be the subject of a contradictory debate. This element cannot constitute the sole basis of the judge's reasoning if there are other elements at his disposal, which should guarantee the use of this evidence.

Conclusion

Human society is characterized by dynamism and evolution. Social relations undergo constant changes, both qualitatively and quantitatively. Legislation must always adapt to these changes, and legislate them .Summing up our discussion, I feel I must express my concern that the general assessment of the legitimacy of atypical evidence loudly proclaimed by the prevailing case law of the Supreme Court may produce (and in fact has produced) poisonous fruits precisely with respect to those stated objectives of valorising the free conviction of the judge and maximising the search for material truth, under the banner of which that openness was favoured. From the first point of view, because the orientation of general admissibility of atypical evidence, merging with the equally consolidated teachings that prescribe on the one hand a global and comprehensive evaluation of the evidence by the judge of merit and deny, on the other hand, that a hierarchy can be established among the freely assessable evidence, risks valorizing not so much the free conviction of the judge as his arbitrariness, placing - as has been effectively said - the factual judgment in a sort of grey area, removed from the force of any normative or rational rule, and therefore from any serious possibility of control (think in this sense of the tralatitian proposition according to which "the choice, among the various evidentiary results, of those considered most suitable to support the motivation, involves factual assessments reserved to the judge of merit who, in basing his decision on one source of evidence to the exclusion of others, encounters no other limit than that of indicating the reasons for the solutions accepted, without being required to discuss each single element or refute all the deductions defensive, all the objections and circumstances which, although not specifically mentioned, are logically incompatible with the decision adopted.From the second point of view, because, in the trial model to which the indiscriminate admission and use of evidentiary material of the most obscure origin inevitably tends, "not only can the principles of orality and immediacy no longer find application, not even symbolically, but the judge's participation in the formation of the evidence ends up disappearing." [1]

In conclusion, I think that it is still relevant, and we should pay more attention, to Chiovenda's warning according to which there is "a relationship between the function of evidence and the form of the procedure", by virtue of which "the freedom of conviction requires the air and light of the hearing", while "in the labyrinths of the written process it is corrupted and dies" [1] In this regard ".... Administrative certificates cannot constitute evidence with full probative force in favor of the public administration itself from which they derive, which it intends to use as evidence in a case, they may nevertheless take on the value of indications and form the conviction of the court in harmony with other evidentiary elements.

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[10] Decision of the Court of Cassation of Italy 4186/2004, Mario Conte, "Le Prove Civili", Giuffre Editore, Milan, 2009, page 675.
[11] Decision of the Court of Cassation of Italy no. 12763/2000, Mario Conte, "Le Prove Civili", Giuffre Editore, Milan, 2009, page 662
[12] Decision of the Court of Cassation of Italy No. 1320, dated 7.2.2000 Mario Conte, "Le Prove Civili", Giuffre Editore, Milan, 2009, page 689
[13] Decision of the Court of Cassation of Italy no. 21885/2004, Mario Conte, "Le Prove Civili", Giuffre Editore, Milan, 2009, page 695
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Witness in the Criminal Process in Comparative Aspect

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Abstract

The proof with witnesses, always constitutes interest for the parties in a criminal court process, especially this for investigation bodies of in the detection of the criminal offense, identification of the author and subsequently for taking criminal responsibility of his and putting before justice to judge him. The proof with witnesses represents great importance also for the defendant and his defending attorney, playing an important role in the defense strategy and opposse the accusation raised by the prosecution. The purpose of this paper is to get acquainted proof with witnesses, who are the qualities that a witness should have in a criminal process, the role and manner of obtaining this evidence, witness protection and familiarity with special techniques of of receiving to testify and what matters in the end is the position that there is evidence with a witness in the final decision that gives by the court for the defendant. In this paper initially the meaning of the witness will be addressed in a lawsuit and history in periods different after 1928 until today, analyzing in different historical periods the role of the witness in a criminal proces, seen in the historical context where and the criminal legislation of the Albanian state has changed to corresponding to the legislation during the reign of Zog I, then the legislation during the communist dictatorship, the first years of transition and the first steps of a procedural criminal law and finally the current procedural criminal law. In this paper a comparison of legislation is also addressed a of domestic and western legislation as far as the witness is concerned and his role in a criminal trial that at the stage of investigation and then trial considering notably, French and Italian legislation, taking in consideration and connection that our procedural law has with these two legislations. In this paper will be treated the first procedural phase in which testimony is taken during the preliminary investigation, identifying two main moment where initially relates to the upon detection of the offense and the author after the event occurred, these actions committed by judicial police officers and the next stage of the preliminary investigation is the actions of the prosecutor or the procedur body. In the main trial phase, will be treated the role and importance of the in testify taken

before the court, also manner of taking proof with witnesses during the trial, the provability and the ratio- provability that this proof has with other proof that predicts the law procedural criminal. In the main of the part of the paper has been analyzed exhaustively the new changes in the criminal procedure on proof with witnesses, also are treated the procedural means that protect the witness physically and the content of the evidence by analyzing in particular the techniques of taking testify, the importance of implementing these techniques and the problems that appear in their implementation in connection with a due process of law.

Keywords: Witness, witness indirect, main trial, preliminary investigation

Methodology

Methodology used in the realization of the topic"Witness in the criminal process in comparative aspect", begins with the use of the deductive method where from general attitudes it is passed to special ones, to extract the meaning of witness, this method has been used where from the meaning of the witness in the general his past in the special sense of the witness of a criminal process.

Through the historical method it has been enabled to display of a wide panorama on the way it has been and how it evolved then procedural legislation evidence with witnesses and its role in the judicial process.

In the paper has been used and the comparative method, where it was first used to compare domestic legislation with Western legislation, specifically the French and Italian legislation, where and has the bases our criminal procedural legislation. Also comparative method was used and to compare proof with witnesses in two different court proceedings, the civil and the criminal, making the difference between them.

Broadly is method used of analysis of legislation and method of case study, where by is identified and analyzed norms of legislation to identify the way how the testimony is taken during investigations and during the main trial see this even according to examples taken from the courts of ordinary jurisdiction, including and the Supreme Court or Constitutional court. Also in the literature have been used formal and material resources taken from the legislation albania since 1928 to the present day, comentators of jurisprudence, as well as judicial jurisprudencee over the years.

Content and concept of proof with witnesses

"I Swear to tell the truth, the whole truth and not say anything that is not true. "[1]

[1] The oath of the witness provided in article 360 of the Criminal Procedure Code of the Republic of Albania.

[2]http: //www. dictionary. science.org/ witness.

This is the oath that makes a witness before the court, before he gives his testimony. I started with this oath to show that this is the main moment where the proof with witness takes value not only probative but also responsibility for the witness to tell the truth. Finding out the truth is a challenge for all parties in a lawsuit and the goal of any society seeking justice. In a trial justice does not make sense without the truth, but who is the truth in a trial. Depending on the type of civil, criminal or other character of the trial, the true trial is related to the facts, the events which are reflected, shown, proven in one of the ways of proving provided by law in a criminal process.

One of the evidence to authenticate the existence of the fact is the evidence with witnesses. In other words, one of the means of proof by which the parties are free to prove their claims on the existence or non-existence of legal facts and on which they base their accusation, claims, objections or claims are the statements of persons who have knowledge on the circumstances of the fact or expressed in legal terms, the statements of witnesses.

According to the dictionary of the Albanian language, the witness is the one who is present at an event and sees with his own eyes what happens or hears what is said[1]. From this definition we understand that a witness is one who is present at an event, so it is physically present and sees the event, the fact how the event occurred. According to this definition, a witness is one who hears what is being said by receiving information through the hearing receptor. Yes, according to the dictionary of the Albanian language, a witness is also one who makes a written or oral statement to prove something; straight. One who is called to testify before the judiciary about someone or something he knows, has seen or heard. From the definition given in the dictionary of the Albanian language, the witness must have two main qualities to be such in a court process, which are the receptors of sight and hearing.

The witness is first of all a natural person and according to civil law a natural person is any person born alive so witnesses in a trial are only people. It is understandable why only natural persons are witnesses as this evidence is related to the perception through the senses of the event that occurred. The witness perceives what happens in the outside world and then reproduces it in his memory and declares this stored information or witnesses in the judiciary, a quality which legal entities do not have.

The witness must look or hear and be mentally capable, are the skills he must have to serve as proof this relates to the object of provability that this evidence has as he will tell before the court or procedural body what he has seen or heard. The development of sight and hearing receptors is not the same for every age therefore and despite the fact that the natural person may have these he can not be witnesses and this includes children who at that stage of age do not correctly understand and perceive reality,

also includes persons who suffer from mental or psychotic disorders who have a different perception of reality, worldview and who can not prove the reality, so the truth.

In a criminal process, a witness is the one who saw the event, saw how he committed the criminal act, how the criminal act was committed, in this case the witness is ocular so he is at the scene where the criminal act and has seen through sight and heard. The eyewitness in a criminal process very important as he is aware of the criminal offense. An eyewitness has the legal obligation to notify the justice authorities that a crime has occurred in the opposite he bears criminal responsibility[1], but has no obligation to report that he has seen the commission of a criminal offense. Receiving eyewitness information from the judiciary, especially those of the investigation at this stage is important, first in detecting the crime, but also in detecting the scene which then helps in obtaining other evidence that may be material evidence such as traces, items, etc. that serve the provability of the existence of the fact and the discovery of the author.

The witness may not have seen the event, but may have heard it or itselfo or has heard it from others. The witness who has heard himself not from other persons about the fact, the event that happened in the outside world constitutes direct evidence or direct proof as it is directly related to what he heard and what happened, this connection is made through the hearing receptor. Direct evidence is given by the eyewitness who saw the event through the visual receptors.

The witness may have information about the facts or events that occurred in the outside world heard by other persons and in this case the testimony is indirect or indirect evidence as what the witness heard is not directly related to what happened in the outside world but indirectly after receiving this information and storing it in his memory from other persons.

Witness is also the person who is aware of the perpetrator who committed the criminal act or who is aware of the existence of another proof provided by law that proves the existence of the fact, event. Witness can be the victim of the criminal act, so on which they have come the consequences of the illegal action, witness can be any person who has perceived through the senses of events that occur in the outside world and has reproduced them in memory and that are important in a criminal act, witnesses may be the expert who has performed an expert act and whose testimony is required for the scientific, technical knowledge he has and which are related to the reason for his summons to criminal proceedings. In a criminal process during the investigation, the statements of persons who are aware of the criminal act, the

[1] Article 300 of the Criminal Code of the Republic of Albania stipulates that failure to report to the criminal prosecution bodies, the court, the public order bodies, the government or the administration, a crime that is being committed or has been committed, is punishable by a fine or imprisonment for up to three years

perpetrator, etc. have the quality of statements before the prosecuting authority, while they take the value as evidence when they testify before the court.

Evidence to be considered as proof and to have probative value must first determine the information, the data received from it to to have connections to the criminal case that is being investigated when it is in the investigation phase or that is being tried when it is in the phase of the trial of the criminal act. This is also the object of evidence with witnesses where there is only information given, related to the criminal offense and its perpetrator.

The source of where he got this information given by the witness or the declarant during the investigation phase is of essential importance in the object of the evidence as it shows where he learned what he said before the justice authorities. If he has seen and heard them himself or has learned and heard them from other persons. The narration of the source is important for the veracity of the evidence and also leads to the discovery of the event, criminal offense, author, material evidence, etc.

The witness must have the physical and mental abilities treated above in such a way that the perception of the outside world is as close as possible to the truth and the reproduction in the memory of the witness is what he has received from the outside world. This process is realized only when the witness has the physical and mental ability to realize the perception of the fact. Physical ability is more related to physical ability including sight, hearing, memory, etc., which are necessary for the witness to absorb information that has occurred in the outside world and store it in memory by reproducing it at the moment when he will give statements or testimony before the judiciary. The psychic ability of the witness is related to the psychic problems that the witness may have which makes him incapable of testifying or in other words the witness exhibits mental health problems that bring about a negative effect on the way an individual thinks, feels and behaves.

And that finally but not out of importance is the taking of evidence during the main trial or the statement during the preliminary investigation according to the manner and form required by law. This is the duty of the judiciary to respect the manner and form required by law that the evidence or statements be usable on the contrary they can not be used and can not be the object of proof.

The proof with witnesses in civil and criminal process

The proof with witnesses it is widely usable by the parties in various lawsuits. The witness comes to the aid of the parties to prove a fact, event, situation, etc. for which the parties may not have other means of proof and in this case constitutes the main evidence of the process and in the end the court decision will be supported. In a court process, proof with a witness is required by the parties, which may be the plaintiff,

the defendant, the third person[1], while in a criminal trial, proof with a witness is required by the prosecutor, the defendant or the victim if the offense has violated the legal relationship of a the person or several persons protected by criminal law.

The manner of calling the witness in a court process vary from a civil and criminal trial. The witness in a criminal trial may be called by the investigating body during the preliminary investigation, or may be requested by the parties which may be the person under investigation or the defendant, his defense attorney, the victim or his defense lawyer, but the decision is made by the prosecuting authority. and at this stage the witness has the qualities of a declarant.

The proof with a witness in a civil trial is taken only during the main trial of the case, before the court and in the presence of the parties, the statements of the persons before the trial have no probative value, the only case that they have probative value are when these statements are reflected in private written evidence edited according to a form and content provided by law as the value of provability or validity.

The witness in the criminal process as we have treated above must have physical and mental abilities to testify, even in a civil process the witness must have these physical and mental abilities to testify but the difference between the two processes lies the age of the witness where in a criminal process there is no age limit to be a witness. Otherwise it stands in a process where a juvenile under the age of fourteen cannot testify and as an exception it is only in special cases where the testimony of a juvenile under this age is taken.[2] This difference between the two processes in terms of the age of the witness is understandable why this criminal policy was pursued as a criminal process in terms of how it takes place, the legal relationship that is protected, the importance of making a decision as fair as possible constitutes a exception to the general rules allowing the taking of a proof with witness of a juvenile who may not have reached the age of fourteen but always respecting the general rule that of the physical and mental ability of the witness.

Object of provability to the proof with witnessses in both also processes varies. The witness of a civil trial is called to testify about the information, the data he knows regarding the establishment, modification of a civil legal relationship. Witnesses to this process give evidence to the court about facts that he knows and that are relevant to the case. Witnesses tell the facts as much and as they perceived the facts.

The witness of a criminal judgment is called and testifies about what he has seen and heard about the criminal offense, its existence, its perform her, the way it is performed, the tools that have been used, in identifying the perpetrator or traces, in

[1] Articles 189-200 of the Code of Civil Procedure. The third person is every person for whom any the decision which will be given in a leaked lawsuit filed between other persons may have importance to his interests.

[2] Article 235 of the Code of Civil Procedure of the Republic of Albania.

identification in finding material evidence.So from this we derive conclusion that proof with witness in a process civil there are object provability for those facts related to that civil relationship object of dispute between parties whereas in a process criminal object of evidence relates to the criminal offense and her author.

Proof with witnesses its not unlimited in both processes. The way of restriction is different. In civil court process, proof with witnesses can not be used in cases where the law on the validity or examination of a legal action requires a document. To understand this I am dealing with a concrete example. The substantive civil law predicts that the legal action for the transfer of ownership of immovable property must be made by a notary deed otherwise it is invalid as a legal action.[1] In this case, if the legal action was performed not with a notary deed, in a civil court process we can not prove this action performed by the witness. The same restriction on the use of the most probative evidence also applies to the dorsal contract where the law provides for a simple document for the effects of proving and otherwise if this contract is concluded between the parties without a document then in case of dispute between the parties for its existence and content evidence with witnesses may not be used. Regarding this restriction, the High Court also ruled with decision no. 181, dated 16.7.1958, where it expresses that: *"The contract exists if the will of both parties has been expressed, ie if an agreement has been reached between them to establish, change or terminate a certain legal relationship, but due to the lack of a document it must be proven by other legal evidence and not with witnesses."*

In addition to the restrictions provided by substantive law, proof with witnesses is subject to several other restrictions of a procedural nature. The Code of Civil Procedure excludes the possibility of using evidence as evidence against or beyond the content of an official or private act that constitutes full proof.[2][3]

Despite this restriction on the use of evidence with witnesses during civil litigation, again in specific and special cases, even when this restriction exists, it is allowed to take evidence with witnesses, such as: when the document required by law for validity or examination of legal action has been lost or is broken through no fault of the party, or when there is a beginning written proof.

It is called the beginning of written proof any document, which derives from the one against whom the search is directed and from the content of which it turns out that the alleged fact is almost true.[4] In judicial proceeding criminal the proof is limited as the witness can not testify about the moral position of the defendant, except when the case is related to facts that are valid for determining his personality in relation to the criminal offense and social danger, can also not be used the testimony of one who

[1] Article 83 of the Civil Code of the Republic of Albania.
[2] Article 231 of the Code of Civil Procedure of the Republic of Albania.
[3] Article 232 of the Code of Civil Procedure of the Republic of Albania.
[4] Article 233 of the Code of Civil Procedure of the Republic of Albania.

refuses or is unable to tell the person or source from whom he became aware of the facts being questioned is more related to indirect evidence and also when the witness does not indicate the source from where he saw or heard it fact of which you are testifying.

In both court proceedings, such as civil or criminal, they are right not to be testified by relatives , persons who have blood ties up to the second degree, up to the second instance, marriage, spouse, spouse, except when they themselves admit to testifying[1]. This prediction is not a limitation of proof with witnesses but more the right of persons, ie the right of the witness who is related to one of the parties, which may be a blood relationship, adoption, marriage, etc. to exercise this right to testify before the court or give statements before the proceeding bodies.

The manner of taking evidence with witnesses and place of its receipt also varies we both litigation. The general principle finds application in both processes both civil and criminal which is taking of proof with witnesses before the court, in the presence of the parties and the place is the courtroom. In a court process can that in special cases or because of disease or because of work in special that makes the witness, circumstances that make it impossible for him to appear at the trial, the court may decide that his question be asked outside the center of the court by a member of the trial panel. The question of a witness is whenever in the presence of the parties or their representatives, who are notified regularly. This is an exception case when the manner and place of taking evidence with a witness is not in front of the court, in the courtroom but in a different environment and only in front of and a member of the court panel. In the criminal process because of the importance and the great danger that may be threatens to the witness physical or in its substance the law has provided and different ways of obtaining testimony and not in court premises as an example obtaining the testimony of a juvenile under fourteen years old which is done without the presence of the judge and the parties in the environment in which it is located a juvenile, and when possible via audiovisual tools.[2] Obtaining testimony from a witness with a hidden identity where the parties as the defendant and his lawyer or the victim and a part of the court panel are not aware of the exact identity of the witness as his identity data presented in court are false and placed between the prosecutor and the presiding judge. Also the testimony of collaborators of justice, infiltrators or undercover persons, and protected witnesses and witnesses with hidden identities takes place under special measures for their protection, using technical means, obtaining evidence at a distance, etc which will are addressed below in this paper in more detail.

Historical look on the proof with witnesses in Albania

[1]Article 235 of the Civil Code of the Republic of Albania and article 158 the Code of the Penal procedure
[2] Article 361/ Code of the Penal procedure Republic of Albania

Criminal and procedural criminal law before the Albanian state won independence and was recognized consisted of customary law where the most important were Kanun of Skënderbeg, the Kanun of Malsisë e Madhe, the Kanun of Labëria, the Kanun of Lekë Dukagjini, among them the most prominent is the Kanun of Lekë Dukagjini.

According to customary law, according to the proceedings in the Kanun of Lekë Dukagjini, he knew the following evidence (evidence): the admission of the defendant, the word of honor, the person who showed someone's deed, e.g. for a covert theft or murder, oath (beja), jurors or betars (§ 1044), witnesses, experts, tracing (§ 769), guarantors and flagranca.[1]

The creation of the new Albanian state in 1912 brought the necessity for the organization of the new legal and judicial system in order for the Albanian state to be separated from the Ottoman legal system. However, the Ottoman Criminal Code of 1858 and the Criminal Procedure Code of 1879 were in force until the adoption of new laws to be approved by the new Albanian state and the Government of Vlora created by the People's Assembly of Vlora. The Assembly of Vlora on 10.05.1913 approved the Kanun e Zhurisë which is the main law issued by the Albanian state after the declaration of independence on 28.11.1912. According to the Kanuri i Zhurisë, at trial it was predicted even proof with witnesses (Article 14),[2] the way the trial was conducted and the taking of evidence with witnesses was linked between customary law and contemporary legislation. It was this Kanun that marked the beginning of the implementation of criminal law and criminal procedure as well as the judicial organization with elements of western law.

The approval of the Basic Statute of the Kingdom of Albania of 1928, the Criminal Code of 1928, the law of 1929 "On the organization of justice", brought the western models of organization of the judiciary and criminal law as material and procedural. Chapter IV, Chapter 1 of the Criminal Code of 1928 provided for the obligation to testify in case of witness has been called by a judicial authority. The witness has a legal obligation not to create false situations that preclude him or her from testifying or refusing to testify.[3] The witness must also tell the truth before the court or the councils, because according to Article 246 of the Bird Criminal Code of 1928, anyone who, by testifying before a judicial authority, testifies as false, or denies the truth, is punished. Zog Criminal Code 1928 refers to such a definition of a witness who does not tell the truth before the judicial authorities as a false witness. This code has defined that a witness has no legal obligation to testify if telling the truth he or she would expose himself or herself or one of his or her relatives to a detriment to his or her liberty or honor or to a relative or because of his or her qualities. which he has stated in court, he should not have been obliged to testify or he should have been informed that he had the right

[1] The Kanun of Lekë Dukagjini, a work by Shtjefën Gjeçov, is republished according to the 1933 edition printed in Shkodra

[2] Kanuri i Zhurisë, Publication of the Center for Official Publications

[3] Article 239 of the Criminal Code 1928.

to withdraw the testimony, ie the witness has no obligation to testify if the parties to the process has to do with blood, marriage, etc.[1] The witnesss before testifying should have been made aware that in case he has gender connection, marriage has the right not to testify before judicial authoriti

In the judicial proceeding developed in the Court of Dictation (Court of Appeal) to the defendants Zija Hallulli, etc. in the trial known as the trial of those implicated in the "monopoly knobs" during the King of Zog with a composed trial panel of the President Mr. Izet Leskovik, and zz members. Pandeli Martiniani, Dhimitër Goda; prosecutor Mr. Komnino in in some sessions were questioned 15 witnesses of World Law: Sulejman Dashi, Vehib Hoxha, Kamber Hidi, Ibrahim Kodra etc. Each witness was literally read the testimony (testimony) made in the previous trial, so that of first instance, these evidences were accepted and other facts were proved.2Witnesses questioned in the court of first instance or the court of first instance were also re-examined in the court of dictation or appeal, making known what they had stated in the court of first instance.

The Criminal Procedure Code of the Socialist People's Republic of Albania approved in year 1979 and changed in year 1981 determines the witness as proof where he defines the proof with witnesses as any person summoned by the court or investigator to testify for facts he is aware of (Article 19). The proof with witness under this code is prohibited to be taken for persons with physical or mental disabilities that prevent the taking of evidence that it is regular and the value of evidence with witness falls if the witness does not indicate the source from where he learned (Article 19). A juvenile witness who has not reached the age of 14 is questioned in the presence of a teacher, his / her legal representative who may be a parent, guardian or in the presence of a relative (Article 20). Witnesses in a criminal trial are questioned separately and only about the facts for which the case is being investigated or tried. Minutes are kept for the question of the witness, his question and answer (Article 80). The witness at the end of the interrogation and testimony process has the right to read it and request completion or correction (Article 81). The trial in the first instance according to this code is conducted by the court by listening directly to the witnesses and reads the statements of the witness taken during the investigation by the investigator in case the witness died during the trial, could not appear at the trial for reasonable reasons (Article 136). A witness who was not questioned during the investigation and is required to appear at the trial may be notified by letter if the witness finds it difficult to appear at the trial and the testimony is obtained from the court where the witness resides (Article 137).

Evidence with witnesses according to this code is called and taken by the court or the investigator and not by every subject of criminal proceedings is at the discretion of

[1] Article 247 of the Criminal Code 1928

[2] https://liberale.al sensational process haw the King of Zog condemned the high

the court and the investigator what evidence they will take, which witnesses they will call (Articles 17 and 19).1

What is noticed from this legislation is that the proof with a witness is at the discretion of the organs that will decide justice, the court or the investigator to request and receive this evidence by not allowing other parties to bring witnesses as evidence to oppose the accusation. The proof with witnesses during the communist period has served as the main proof at trial in the sentencing many defendants, especially those of a political nature, and proof with witnesses was seen as a powerful weapon that the then investigator had to accuse and the court of convicted the defendant.As an example, we are giving the way of taking the testimony of a witness in the criminal trial held against the defendants Kadri Hazbiu, Fecor Shehu, etc. in year 1983.

After 1990, with the overthrow of the communist regime Albania enters a transition of political, economic, social, legislative change. The Code of Criminal Procedure was approved in 1995 with law No.7905, dated 21.3.1995 based on article 16 of law no.7491, dated 29.4.1991 "For the main constitutional" after at this time the Constitution of the Republic of Albania had not yet been drafted and approved. This code adopted in 1995 regarding the proof with witnesses has undergone changes but not regarding the object of proof with witnesses which is the same and the witness is asked about what constitutes the object of proof which are the facts and circumstances related to the offense, criminal and that serve to prove the commission or not of the criminal offense, the consequences arising from it, the guilt or innocence of the defendant and the degree of his responsibility (Article 149). In relation to incompatibility with the duty of a witness, the provision has changed in terms of wording and terms that have been used as for example in the Code of Criminal Procedure of 1995 unchanged in Article 156 it is stated that persons who, for due to physical or mental disabilities, are not able to testify regularly, while with the new changes the terms have been changed where persons who, due to physical or mental disabilities, are not able to testify can be questioned as witnesses. regular evidence, so the term has been changed from mental and physical disabilities to mental and physical disabilities. The manner of obtaining the testimony of the President or senior officials has been repealed by the subsequent amendments to the Code of Criminal Procedure where according to him in 1995 unchanged their testimony was taken at the headquarters where they exercise their functions, while with subsequent changes the testimony their is taken according to the general criteria for the manner of obtaining evidence or statements (Article 162). The taking of the testimony of the juvenile witness has undergone changes where according to the unchanged code the questioning of the juvenile witness can be done by the president (judge), on the requests and objections of the parties. The the chairman may be assisted by a family member of the juvenile or by a specialist in the field of child education. When it is

[1] Code of Criminal Procedure of the Socialist People's Republic of Albania approved in 1979 and changed in the year 1981

estimated that the direct questioning of the juvenile does not harm his psychological state, the presiding judge shall order that the questioning continue in accordance with the provisions of paragraph 1 which is the questioning of witnesses initially by the prosecutor or counsel or representative who requested the questioning. According to the new changes to the Code, this prediction above has been repealed and the question of the juvenile is done without the presence of the judge and the parties in the environment in which the juvenile is, when possible through audiovisual means. The question is asked through a psychologist, educator or any other expert and when it is not contrary to the interests of the trial or the child, the parents or guardian may be present during the interrogation. Only in special cases can the juvenile be questioned by the judge in the presence of a psychologist (expert). The 1995 Code of Criminal Procedure, unchanged, did not provide for specific techniques of obtaining evidence, or specific techniques of physical protection of the witness or the object of the testimony.[1]

The proof with witnesses according to legislation Italian and French

In legislation Italian any citizen can be called as a witness in a criminal process. The court is the subject that authorizes the parties to call the witness they have requested to be taken as proof and the witness party has the obligation to presented to give his testimony and to tell only and exclusively the "truth".

The witness in a court hearing is summoned by the party who requested it, he is identified by name, surname and date of birth and then the oath is read to him by the judge.

The formula of the witness oath under legislation Italian is: "*Being aware of the moral and legal responsibility I take with my deposition, I take it upon myself to tell the truth and not to hide anything that is known to me*." After the oath is taken the witness is asked: firstly by the party requesting the witness (charge or defense), then the other, and finally by the judge. Under legislation Italian the object of testimony is what the witness has seen or heard in the first place, not what someone else has told him or her has seen or heard (unless he or she indicates the name and surname of the person who told him or her about which he is proving: then on the other hand, this person, called a witness "de relato" which means "with hearing", can be called to confirm the facts).

Italian legislation has provided that the witness is questioned on the facts which are the object of the proof. He can not testify about the morality of the accused, except in cases of specific facts, appropriate to qualify his personality in relation to crime and social danger. The witness is questioned about for some facts. He can not testify about

[1] Law no.7905, date 21.03.1995 Criminal Procedure Code of the Republic of Albania unchanged

the rumors circulating in public nor express his personal assessment, unless it is impossible for them to be separated from the deposition on the facts.[1]

Every person has the capacity to testify and if it is necessary to verify his physical or mental suitability to testify, the judge at the request of the defendants or principally, may order an investigation of this physical and mental suitability with means allowed by law.[2]

Witness on the basis of art. 198 of the Italian Code of Criminal Procedure entitled "Witness Obligations" is obliged to be presented before a judge and to answer verity the questions that are asked, about the facts that he knows and that are of interest, and not about opinions. The witness has the obligation that if it is impossible for him to be present at the hearing, he must notify the judicial authority or the procedural party that requested the summons, showing the reasons for the obstruction.

The Italian criminal legislation also provides for the right of the witness to receive compensation for the given engagement, the expenses made, the lost time, etc. that are provided in the Presidential Decree no. 115, dated 30 May 2002.

Legislation Italian also provides for the right of a witness not to testify in case there is blood connection, cohabitation, adoption relationship, etc. with the accused (Article 199), also has the right not to testify the witness who due to work, profession maintains an office secret, state, professional (articles 200,201,2020).

For judicial police informants and security services, the Judge can not oblige judicial police officers and officers, as well as personnel employed by the military intelligence and security services, to disclose the names of their informants. If they are not examined as witnesses, the information they provide cannot be obtained or used.[3]

Article 101 of the French Code of Criminal Procedure provides that a witness be summoned by a judge and this is enforced or executed by a bailiff or a law enforcement officer who notifies all persons whose testimony the judge considers useful. Witnesses may be summoned by plain letter, ron registered paper or administrative means; they can also apply voluntarily.

Witnesses take the oath to tell the whole truth, nothing but the truth. The judge asked them their name, first names, age, state, profession, place of residence, regardless of whether they are relatives or allies of the parties and to what extent or if they are in their service.[4] Children under the age of 16[5] are heard without taking the oath. Under French law every person summoned to testify as a witness has the obligation to appear before you, to take an oath and to testify, subject to the provisions of Articles

[1] Article 194 Code of Criminal Procedure of the Italian Republic
[2] Article 197 Code of Criminal Procedure of the Italian Republic
[3] Article 203 Code of Criminal Procedure of the Italian Republic
[4] Article 103 of the French Code of Criminal Procedure.
[5] Article 108i of the French Code of Criminal Procedure.

226-13 and 226-14 of the French Penal Code. If the witness does not appear or refuses to appear, the judge, at the request of the prosecutor, may force him to do so by force.[1]

Special interrogation techniques and the witness with a hidden identity

A witness in a criminal processcan be put front a serious risk to himself or herself and his or her family if he will testify that his life or or family members will be put at risk. The Code of Criminal Procedure, in case there is a risk that the witness may be threatened,it life may be endangered, has foreseen and he has solved the possibility for this witness to be protected in the first place by providing protection through institutions charged according to law no. .10 173, dated 22.10.2009 "For witness protection and collaborators of justice". In the giving of testimony before the court for witness protection and collaborators of justice special techniques are used of interrogation and in special cases with hidden identities.

Protected witness but with an identity known by the parties in the process as the defendant, his defense counsel and the injured party, due to the risk of intimidation, violation of testimony, his testimony is taken through special techniques where the question takes place remotely and through audiovisual connection. In this case, the identity of the witness is verified by the person authorized by the court who is together with the witness, the care for his protection and the progress of the testimony. The whole process is documented through the minutes.[2] The judge at the request of the Prosecutor may decide that the witness be questioned with a hidden identity for the parties, in this case the identity of the witness is known only by the prosecutor of the case and the presiding judge, while the other parties in the criminal process do not know the identity of witness but know only by his nickname given by the court. The witness is questioned with a hidden identity as there is a serious risk to life for the witness and the member of his family and keeping secret the identity of the witness secret prevents such a serious risk. Also his testimony is very important for the case as otherwise his testimony could not be taken and the interest to protect the witness is more important than the interest of the defendant to know the identity of the witnesses in the implementation of the procedure for taking of evidence without special techniques but according to general rules.[3]

Discussions and Conclusions

In Albania, witnesses in the criminal process have not cost them they maximum attention and the proceeding bodie have been prone to in the criminal process at least to present a scientific proof. Often times the witness because of blackmails, various intimidation and threats have changed testimony at various stages and this because competent bodies have not been shown to be careful in the protection of witness data especially during the preliminary investigation phase when statements before the

[1] Article 109i of the French Code of Criminal Procedure.
[2] Articles 361/7 dhe 361/b of the Code of Criminal Procedure of the Republic of Albania.
[3] Article165/of the Code of Criminal Procedure of the Republic of Albania

prosecutor or judicial police officer must be confidential and in no case should they be shown to the public or to the defendant and his defense counsel, the prosecutor or the judicial police officer must be confidential and in no case must they be told to the public or to the defendant and his defense attorney. Evidence in a criminal proceeding is as important as a scientific proof to be discovered and taken as proof under these conditions which in many cases is impossible to detect and take as proof under these conditions the bodies participating in a criminal proceeding must be extremely careful that in the first phase of investigations to protect the witness so that he is provided with security for himself and his family. The Albanian state after the changes made in the Code of Criminal Procedure in 2017 took a step forward for the protection of witnesses in a criminal process and this was reflected in practice where some of the very serious crimes which had years without revealing the identity of the perpetrators through protected witnesses and collaborators of justice it became possible to identify them, but what resulted after the identification of the perpetrators was the discovery of the identity of the witness and the publication of his identity in every media portal. In this case, the Albanian state must take urgent charging them with responsibility and media, which as an information actor in a criminal process must collaborate with the prosecuting authority to keep the identity of the witness or collaborator of justice secret.

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[2] Code of Civil Procedure of the Republic of Albania.
[3] Civil Code of the Republic of Albania.
[4] Code of Criminal Procedure of the Italian Republic.
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[6] Criminal Code of 1928 of the Kingdom of Albania.
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[8] The Kanun of Lekë Dukagjini, a work by Shtjefën Gjeçov, is republished according to the 1933 edition printed in Shkodra.
[9] Kanuri i Zhurisë, Publication of the Center for Official Publications

Body Proportions in the Success of Classic Lifts in Weightlifting

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Abstract

Weightlifting is a strength sport, a sport that attracts the attention of both the public and athletes, precisely because of the natural human curiosity to learn Who is the strongest?" Weightlifting competitions take place in more than 160 countries around the world, making this sport universal. The purpose of our study is to determine whether body proportions (height, torso length, leg length, arm length, shoulder width) affect the technique of the classic lifts, specifically avoiding the classic model of this technique. To observe these deviations in technique, we conducted anthropometric measurements of 20 weightlifters from our country to determine the types of body proportions. The comparison of body sizes showed a significant difference between the minimum and maximum of the key proportions of the lifters across all weight categories. The data analysis was conducted using the statistical package SPSS (Statistical Package for Social Sciences, version 20.0) and M.Office Excel 2010. Pearson correlation coefficients were used to evaluate the linear relationships between numerical variables, with values of $p < 0.05$ considered statistically significant. It was observed that within the limits of a weight category, there could be lifters with different heights, and on the other hand, lifters with the same height had different leg, arm, torso lengths, shoulder width, and body weight proportions. In our study, it is observed that individuals with the same body weight present different values of body proportions and body height, which also affects the technique of classical lifts, leading to a deviation from the classical model of this technique. Below, in the full text of the article, we will present all the data and values of body proportions, and examine whether they have an impact on the classical lifts in weightlifting, as well as the correlation between the variables.

Keywords: Weightlifting, classic lifts, body proportions, lifters, height, torso length, leg length.

Introduction

Weightlifting is a sport of strength, a sport that attracts the attention of both the public and athletes, precisely because of the natural human curiosity to learn "Who is the

strongest?"
Weightlifting competitions take place in over 160 countries around the world, making it a universal sport. Weightlifting is the sport where the strongest and most powerful men and women in the world are identified (Ikonomi E., 2018).

Many people who are not familiar with this sport are surprised by weightlifters who do not have massive muscles. In fact, weightlifters do not need to have very large muscles, which is why they can also be seen as athletes in good condition for other sports. Weightlifters simply have stronger and more powerful muscles developed through intense, specific training that builds significant strength without developing massive muscles like bodybuilders. Bodybuilders are dedicated athletes, and many of them are quite strong, but they are not as strong as top weightlifters, and their muscles do not need to be as strong because they compete based on muscle appearance rather than strength (muscle mass and strength do not have a high correlation).

On the other hand, weightlifters compete partly to determine who is the strongest among them, with most of them using the weightlifting platform to challenge themselves—to see how far they can push their physical and mental strength. None of us are born strong enough to become a champion in weightlifting, and many champions have started with very basic strength levels. Based on the analysis of the number of countries and licenses received by the athletes of these countries, world and Olympic records, the effectiveness of the performances of the world's leading weightlifters at the Olympic Games is shown (Oleshko V., 2024).

However, weightlifting today is not only practiced as a competitive sport but also as a fitness activity, for which certain characteristics should be considered, as a large number of people engage in weightlifting nowadays. There is a common misconception that weight training is only for strengthening and increasing muscle volume. Of course, the best way to increase strength, not only in weightlifting but also in other sports, is by lifting weights, but this doesn't mean that weight training is limited to these functions alone—it has many other benefits. Weight training boosts metabolism, increases fat burning rates, thus helping with weight loss, and what is even more interesting is that, unlike aerobic exercise, weight training continues to burn fat even after the workout (in a state of rest). Many people mistakenly view cardiovascular exercise as the only way to control and eliminate excess body fat. In fact, aerobic exercise, or as it is commonly known today (cardio), mainly affects the functioning of the heart muscle, while having little impact on muscles and strength. For this reason, anyone who aims to be in shape should not only focus on the "engine" (the heart) but also on the "chassis" (the bones and muscles). Weightlifters compete in the snatch, clean and jerk, and total (snatch + clean and jerk). Commonly used assistance exercises for training weightlifters are front barbell squats and back barbell squats (Lucero, 2019).

When defining the technique of lifting and pushing, individual characteristics of body structure are not usually taken into account, so the technique is learned with a general plan.

The aims of the current study were four-fold. Firstly, we adopted a prospective approach to address limitations of retrospective recall; secondly, we employed a longitudinal approach to better account for the dynamic nature of talent development; thirdly, we utilized a multidisciplinary approach alongside sophisticated machine learning techniques to investigate the complex interplay between psychosocial, physical, and skill acquisition related factors that account for long-term athlete development; and finally, we employed a sport specific model to ensure findings were most reflective of the nuances of Olympic weightlifting. (Anderson DNJ, 2022) Regarding the change in energy of the barbell, we found that the mechanical work for the vertical displacement of the barbell in the first pull was significantly greater than the mechanical work in the second pull. In contrast, the estimated average mechanical power output of the athletes during the vertical displacement of the barbell was significantly greater in the second pull than in the first pull. We conclude that the major elements of the snatch technique of elite Greek weightlifters have not been affected by the new weight classification. (V Gourgoulis 1, 2000)

Materials and Methods

Through the methods of observation and the photography of practical processes, as well as through observations of classical lifts by foreign authors (Worobjow AN., 1984) and our own observations, it was noted that the technique of classical lifts differs depending on body proportions. Weightlifting was usually studied in terms of kinematic and kinetic parameters by various researchers (Garhammer, 1985; Baumann et al., 1988; Lee, Huwang, & Tsuang, 1995; Gourgoulis etal., 2000; (Ulareanu, 2016) & Timnea, 2013; Oleshko, 2014).

To observe these technical deviations, we conducted some anthropometric measurements of several lifters to determine the types of body proportions. The comparison of body sizes revealed a significant difference between the minimum and maximum proportions of importance in the lifters across all weight categories. It was observed that, on one hand, within the limits of a weight category, there could be lifters with different body heights, and on the other hand, lifters with the same height could have different limb lengths, trunk lengths, shoulder widths, and body weight. Based on our observations and direct measurements from around 60 weightlifters from all teams in Albania, it was possible to identify the dominant somatotype among Albanian weightlifters.

With the help of video recordings with a camera, 60 lifts from the best weightlifters were analyzed, which made it possible to determine the trajectory of the barbell, particularly in relation to different body deviations. Video-based methods can be a

cost-effective alternative to a position transducer. For, example, the use of a mobile application on a smartphone device or the use of sports analytics software on a captured video have been shown to be reliable and well-validated methods for the measurement of velocity and barbell trajectory.In the field of biomechanics, devices such as portable force plates and wearables force sensors have been developed to facilitate force measurement outside of a laboratory setting (Ang CL, 2022) Using the comparison method, we were able to identify the barbell trajectories and their optimal differentiation, referencing the trajectories of the best lifters in the world. The assessment of the (Huebner, 2024)technical training was performed by the method of movement postural orientation **(Boloban, (2013).)** adapted by us to the specific features of snatch style, using the biomechanical analysis of the key elements of sports technique by means of the video computerized method. The combination of the "part-to-part" learning method and the correct teaching of classical weightlifting techniques was implemented for optimal execution. Current methods can standardise weightlifting performances across body mass to compare different body mass classes, but they do not address the sex gap. This study introduces a novel approach that puts male and female performances on a single unified scale, across the range of body mass, allowing mixed sex teams to be compared (Huebner, 2024).

Discussion and Results

Below, we present Table 1, which shows weightlifters with the same body weight but different body heights and body segment lengths.

Table 1

Name	Height (cm)	Trunk Length(cm)	Leg Length(cm)	Arm Length(cm)	Shoulder Width(cm)
A.D.	164	51	80	72	37
A.H.	157	56	76	61	38
A.D.	161	50	83	67	43
D S	160	51	80	65	40

As seen from the above table, lifters with the same body weight exhibit different body proportions and body segment lengths, which also affect the technique of classical lifts. This creates deviations from the ideal model of this technique. Next, we present Table 2, which reflects body proportion values of lifters with the same height but different body weights.

Table 2

Name	Body Weight(kg)	Height (cm)	Trunk Length(cm)	Leg Length(cm)	Arm Length(cm)	Shoulder Width(cm)
F.B.	60-67.5	164	57	82	68	46
M.B.	67.5-75	164	53	79	69	43
L.T.	90-100	164.5	55	83	73	48
I.K.	82KG	165	52	83.5	75	40

As seen from the above table, lifters with the same height have different body weights and body proportions.
Therefore, weightlifters from all weight categories may have different body structure types, which can be classified as follows:

Ectomorph – Athletes with long limbs and a narrow trunk.

Mesomorph – Athletes with proportional builds where the key body measurements harmonize well.

Endomorph – Athletes with shorter limbs and a long, narrow trunk.

Below, we present Table 3, which groups the lifters into three categories based on average body segment sizes (as a percentage of height) for the three lifting groups. This table (according to Vorobjev) helps determine the body type by considering the lifter's height and body proportions.

Table 3 The average size of the body parts, such as length and width, of the three groups of lifters

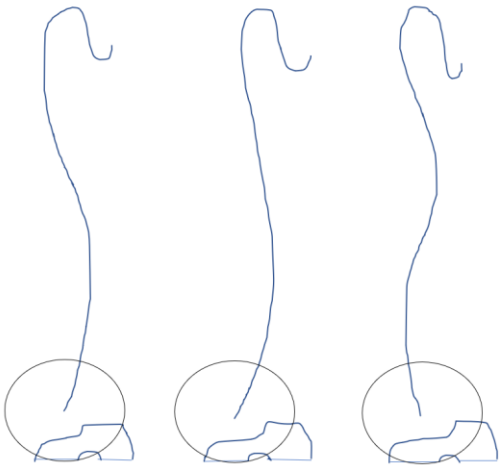
Group	Body Type	Trunk Length(cm)	Shoulder Width(cm)	Pelvis Width(cm)	Leg Length(cm)	Arm Length(cm)
Light Weight	Ectomorph	29 cm	23.1 cm	16.4 cm	55.5 cm	45,8 cm
	Mesomorph	31 cm	24.1 cm	17.8 cm	53.3 cm	44 cm
	Endomorph	33 cm	25.1 cm	19.2 cm	51.1 cm	42.2 cm
Middle Weight	Ectomorph	29.4 cm	22.9 cm	16.0 cm	55 cm	45.3 cm
	Mesomorph	31.5 cm	23.8 cm	16.8 cm	52 cm	43.8 cm
	Endomorph	33.3 cm	24.7 cm	17.6 cm	50.8 cm	42.3 cm
Heavy Weight	Ectomorph	29.8 cm	22.9 cm	16.1 cm	54.2 cm	45.1 cm
	Mesomorph	31.5 cm	23.8 cm	17.7 cm	52,1 cm	43.6 cm
	Endomorph	33.6 cm	24.7 cm	19.9 cm	50 cm	42.1 cm

Based on the above table, we can categorize each lifter's body type. First, the lifter's height is measured, followed by measurements of the trunk length, limb lengths, shoulder width, and pelvis width. The formula used is:
F = (G × 100) / L

where **G** is the trunk length and **L** is the body height, resulting in the **F index**. Using the comparison method and the indices from the table, we can determine the lifter's body structure type.

In a study of 120 weightlifters, we found that 60% had a proportional build (Mesomorph), 30% were Endomorphs (short limbs, narrow trunk), and 10% were Ectomorphs (long limbs, short trunk, narrow trunk).
We now examine how the technique is related to body proportions. It is known that the normal technique may have deviations, and one of the factors causing these deviations is body proportions. The deviations in the kinetic motion of the body segments from the average are influenced by individual differences. Trajectory depends on relative length values of body segments and other important factors (Antoniuk, Pavlyuk, Chopyk, & Pavlyuk, 2016).
Based on our observations and study, a rational technique that works for one lifter may not be effective for another, and in each case, the interaction of internal and external forces should be considered, based on the lifter's physique.

We can conclude that rational and individualized techniques for sporting exercises are inseparable and have a reciprocal relationship.



Type1 Type 2 Type3

"Diagram: Basic variants of the motion trajectory of the axis of the rigid body."

"The first type of result is the trajectory where, after the pull phase from the platform, the axis initially approaches the lifter in the first phase of the pull, then, crossing the vertical line of movement, the axis moves away from the lifter upwards in the second phase of the pull, and again crosses the vertical line where the end of the trajectory is a hook with a length determined by the moment of completing the deep squat during the fixation of the barbell with the arms directed upwards in the snatch style and with the elbows bent, bringing the barbell to the chest in the push style. Finally, for barbell

trajectory as one of the most important performance indices in weightlifting, an optimal control problem is formulated to minimize a criterion function defined as the sum of work done by lifter during snatch lift and solved by using Pontryagin Maximum Principle (PMP). (Jon, 2023)

The second type of trajectory is such that the movement of the piston in the cylinder, similar to the first type, starts by moving upward at the moment the piston passes over the knee (the first phase of the pull).

In the second phase of the pull, the shaft approaches the vertical line drawn from the point of the start of the movement, but does not complete it. The trajectory ends with a hook of a specified width, representing the moment when the piston waits with a downward motion in the release style and positions itself on the chest in the push style.

The third type of trajectory occurs when, at the moment of pulling the shaft from the platform, the shaft begins to move upward from the lifter for a very short distance, without reaching the height of the knees. Then, it crosses the vertical line, approaching the lifter in the first phase of the pull.

By taking measurements from the recorded films, it was observed that in the push style, during the upward push, the angle between the arm extension and the barbell axis was 82 degrees for an Ectomorph, 84 degrees for a Mesomorph, and 86 degrees for an Endomorph.

Normal movement in the scapulohumeral joints was characteristic for weightlifters who, at the point of weight fixation over the head, could freely hold their arms perpendicular to the barbell axis.

The lack of mobility was observed in weightlifters where, during the fixation of the barbell overhead, the angle at the elbow joint was less than 180 degrees, while the opposite occurred with those lifters (although the number was quite small) where excessive bending at the elbow and shoulder caused the angle at the elbow joint during the overhead hold in the push style to be greater than 180 degrees. **The success factor of the snatch has not been identified. Determining the success factors of the snatch among elite weightlifters might help to attain a successful snatch. (Hideyuki Nagao 1, 2019)**

Now, let's see how the angle between the axis of the arm extension and the barbell axis appears in the snatch style. Although this simply represents the width of the grip, which we have previously addressed, we will now present the table below showing the values of this angle for all body types.

Table No. 4: Angle values in degrees for all body types

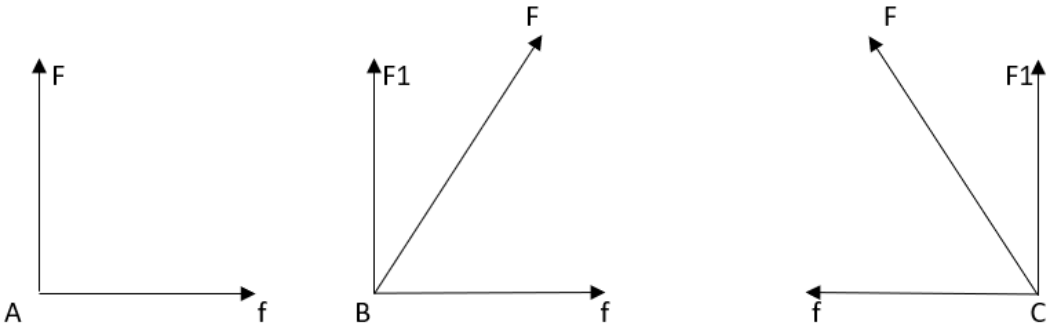
Body Type	Light Weight	Medium Weight	Heavy Weight
Ectomorph	58-59	56-58	55-56
Mesomorph	59-60.5	59-59.5	56-58
Endomorph	60.5-62	59.5-61	58-60

Foot Placement at the Start

The feet at the start in the push and pull style are placed in the width of the pelvis, with the relative position of the axis for the pull above the feet. Observations made for the foot placement in both styles resulted in the following: the projection of the static axis was 2-3 cm behind the metatarsophalangeal joint for the ectomorph type, 1-2 cm for the mesomorph type, and 0-1 cm for the endomorph type. Meanwhile, in the push style, for the ectomorph, the position of the axis at the start was 1-2 cm behind this joint, and for the mesomorph, it was 0-1 cm. Endomorphs primarily place their feet in such a way at the start that the projection of the static axis is 1-2 cm in front of this joint.

Size of the Joint Angles at the Start

In the observations made on different weightlifters, three types of shoulder positions relative to the axis at the start of classic lifts were noted, according to the diagram below:



Let's observe that in the first case, the shoulder joints are directly above the axis, meaning the lifter's lifting force *F* is directed towards the pull from the platform. In cases B and C, the lifter needs to apply an additional force "f" to lift the barbell during the first part of the pull, up to the knee position. In cases B and C, the lifting force *F* is formed by the forces *F*cos(α)* and *f = sin(α)*. As shown in the figure, in case B, the lifter moves the axis towards themselves, and in case C, they move the axis away from

themselves. Barbell kinematics are an essential aspect of assessing weightlifting performance. (Ingo Sandau 1, 2023 Sep)

Conclusion

The results describe several important aspects of the technique in classic exercises. The data obtained are relevant for the lifters now performing the best and those who have recorded results in the most significant competitions. As such, they can be utilized by coaches, who can more easily observe how the technique of classic lifts is presented in their athletes.

Most of the conclusions regarding the kinematics of weightlifting and the movement of the body's segments align with the results recommended by international literature. The exception is the path of the barbell's axis (the trajectory of the barbell), which in many weightlifters, about 60% of lifters, results in the third type of trajectory. This is evident in the first part of the barbell pull from the platform, where generally, lifters move the axis away from themselves, thus expending extra force for the later phases. This is explained by the lack of hip elevation in the first part, which would create favorable conditions for executing the second phase.

Contrary tendencies recently, the study of the barbell's trajectory in the best weightlifters in the world has shown that the trajectory of the barbell comes closer to the lifter in the first part of the pull. As a result, there is a backward lean when entering the barbell under (after the explosion), which is considered a mistake by (Worobjow AN., 1984) Weightlifting performance was quantified through the ratio of barbell mass/body-mass, whereas biomechanical variables were quantified through peak vertical barbell velocity and acceleration (Kristof Kipp 1, 2024 Jan;).

In the analysis we conducted on the trajectories of the barbell for the best lifters, we can also judge the horizontal deviations of the barbell's axis. It should be noted that horizontal deviations always have the vertical axis as a reference point, passing through the center of mass of the weightlifter-barbell system. Very small horizontal deviations were observed in the best lifters during the chest placement and upward push.

According to a study by Gökhan Hadi, Hasan Akkuş, and Erbil Harbili, they suggested that weightlifters should perform the barbell transition and the catching phase more quickly because, as the weight of the barbell increased during the snatch lift, the vertical kinematics of the barbell decreased. (Gökhan Hadi 1, 2012) (Placeholder6)

It was also noted that the height of the barbell increased with the increase in the body weight of the weightlifter, which can be explained by the increase in body length with weight. However, this is not absolute, because, as we emphasized earlier, regarding the body structure of weightlifters, we have encountered cases where a weightlifter of medium weight may be shorter than a weightlifter of light weight.

Previous literature suggests that the clean pull, snatch pull, hang high pull, jump shrug, and mid-thigh pull may provide a training stimulus that is as good as, if not better than, weightlifting movements that include the catch phase (Timothy J Suchomel 1, 2015 Jun;)

It is clear that the development of work capacity alone is insufficient.

This indicates the fact that when a lifter possesses great strength, there may not be proper coordination of movement, whereas a lifter with good movement coordination might not be able to lift a maximal weight if they do not have sufficient strength.

The absolutization of strength with the increase in results is not correct. However, strength must be considered as a fundamental element in improving performance. What is important is that one should know how to work with a lifter according to the deficiencies they display in the training process, and it is essential to know how to work with them using segmental exercises, which, later on, by linking them together, will form a complete and precise technique.

As we emphasized earlier with all parts of the study, which are organically connected to one another, it was observed that the two main components in the training of high-level weightlifters—physical indicators and technical skills, or functional abilities and correlational skills—are interrelated, creating a cause-and-effect relationship between them.

If these conclusions are materialized in practice, we believe they will contribute to the development of a new generation of weightlifters, who will likely surpass past records in weightlifting, possibly starting from a higher base.

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Can AI Replace Human Forensic Accountants? a Study of AI Adoption in Albanian Entities

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Abstract

The rapid advancements in artificial intelligence (AI) and machine learning have introduced transformative changes in forensic accounting, raising the question of whether AI can fully replace human forensic accountants. This study critically examines the capabilities of AI-powered fraud detection in contrast to traditional forensic accounting techniques by integrating an empirical survey of forensic accountants, auditors, AI specialists, and regulatory professionals. Between December 2024 and January 2025, a survey was conducted in Albania among 152 professionals to assess their perceptions of AI's role in forensic accounting. The survey was distributed through professional networks, LinkedIn groups, and direct invitations to practitioners in the financial and auditing sectors. The responses provided insights into AI adoption, accuracy perceptions, efficiency improvements, ethical concerns, and trust in AI-generated fraud detection results. Findings indicate that while AI offers superior speed, scalability, and anomaly detection, it is not universally trusted due to concerns over explainability, ethical considerations, and legal compliance. The majority of respondents favor a hybrid model that integrates AI with human forensic expertise to balance efficiency with interpretability and judgment. This study contributes to the ongoing discourse on AI in forensic accounting, providing empirical data to support the argument that AI enhances but does not fully replace human forensic accountants. The insights gained from this study help shape future discussions on AI's evolving role in fraud detection and financial investigations.

Keywords: Forensic Accounting, Artificial Intelligence, Machine Learning, Fraud Detection, Financial Investigations, Ethical Considerations

Introduction

Forensic accounting is an essential discipline that combines accounting, auditing, and investigative skills to examine financial records and uncover fraudulent activities. It

plays a pivotal role in financial crime prevention, regulatory compliance, and legal proceedings (Afriyie et al., 2022). Forensic accountants are crucial in identifying financial irregularities, supporting legal investigations, and providing expert testimony in litigation and fraud-related cases. Traditionally, forensic accountants have relied on manual methods such as financial statement analysis, forensic audits, and interviews to detect anomalies and potential fraud. While effective, these methods are often time-consuming, labor-intensive, and prone to human error (Akhan, 2024).

The increasing complexity of financial fraud schemes, particularly with the rise of digital transactions, offshore banking, and cryptocurrency-related money laundering, has necessitated more sophisticated fraud detection tools. Artificial intelligence (AI) and machine learning (ML) have emerged as transformative technologies in forensic accounting, offering enhanced capabilities for fraud detection and forensic investigations. AI-powered tools analyze vast amounts of financial data in real-time, identify patterns indicative of fraud, and improve investigative efficiency (Akhan, 2024). Machine learning algorithms, deep learning networks, and natural language processing (NLP) enable automation in financial analysis, significantly reducing manual workloads and improving fraud detection accuracy.

To assess the practical application and acceptance of AI in forensic accounting, this study conducted a survey in Albania between December 2024 and January 2025. The survey gathered insights from 152 professionals, including forensic accountants, auditors, regulatory professionals, and AI specialists, regarding AI's role in fraud detection. The data collection focused on evaluating AI adoption levels, trust in AI-driven fraud detection, and perceived challenges in AI interpretability. Preliminary findings suggest that while AI adoption is increasing, skepticism remains prevalent among experienced forensic accountants, particularly regarding explainability and ethical concerns. Respondents also highlighted AI's potential for generating false positives or missing fraud patterns due to biases in training data.

Additionally, the survey results indicate a strong preference for a hybrid approach where AI supports but does not replace human forensic accountants. This perspective aligns with existing research emphasizing the necessity of human oversight in AI-driven financial investigations to ensure accuracy, ethical integrity, and regulatory compliance (Alhumoudi & Alhumoudi, 2023). Human forensic accountants contribute contextual knowledge, professional skepticism, and legal expertise that AI currently cannot replicate, reinforcing the argument that forensic accounting requires a balanced approach integrating AI with human judgment.

The increasing regulatory scrutiny surrounding AI in financial decision-making further highlights the need for human oversight to mitigate risks associated with AI-driven fraud detection. As AI continues to evolve, its role in forensic accounting will likely expand, but it is unlikely to fully replace human forensic accountants. Instead,

AI will serve as a powerful tool that enhances forensic investigations, streamlining processes and improving fraud detection accuracy while still relying on human expertise for final decision-making and legal compliance.

The rest of the paper is organized as follows: in the following section, we present a comprehensive literature review. Next, we present the methodology of the study and in the fourth section, the data analysis is presented. Based on the findings from data analysis we offer several recommendations for stakeholders and policy makers. We conclude the study with the conclusion section.

Literature Review

Forensic accounting has traditionally played a crucial role in detecting and preventing financial fraud, relying on manual audit techniques to examine financial records, conduct interviews, and verify transactions. These methods have long been the foundation of financial investigations, allowing forensic accountants to identify discrepancies and fraudulent activities (Albrecht et al., 2020). Manual audit techniques involve systematic financial statement analysis, transaction testing, and the assessment of financial ratios to detect inconsistencies (Fay & Negangard, 2017). Experienced forensic accountants often rely on professional judgment and investigative intuition to uncover fraudulent activities, with interviews and behavioral assessments serving as key components in the investigative process (Wells, 2014). However, despite their effectiveness, these traditional approaches are labor-intensive, time-consuming, and prone to human error, which has increasingly necessitated the integration of advanced technologies into forensic accounting practices (Ali et al., 2024).

The growing complexity of financial fraud, coupled with the exponential increase in the volume of financial transactions, has presented significant challenges for traditional forensic accounting techniques. The manual analysis of large-scale data has become inefficient, leading to increased oversight risks and missed fraud indicators (Metallo, 2020). This limitation has driven the adoption of artificial intelligence in forensic accounting, which offers advanced analytical capabilities and automation (Schreyer et al., 2019). AI-powered forensic accounting has revolutionized the field by leveraging machine learning algorithms, predictive analytics, and deep learning models to enhance fraud detection (Schreyer et al., 2019). These technologies enable the processing of vast amounts of financial data in real-time, allowing for more efficient and accurate identification of suspicious activities. Machine learning models such as support vector machines, neural networks, and decision trees have been extensively used to detect fraudulent patterns, learning from historical fraud cases to identify anomalies and previously unseen fraud schemes (Schreyer et al., 2019). The application of unsupervised learning techniques, such as clustering and anomaly detection, has further strengthened AI's ability to recognize irregular financial behaviors (Fay & Negangard, 2017)

Advancements in AI-driven forensic accounting have also been facilitated by deep learning methodologies, which have demonstrated significant potential in analyzing complex financial datasets (Schreyer et al., 2019). Convolutional neural networks and recurrent neural networks have proven effective in identifying fraud patterns that may not be easily detectable through traditional audit techniques (Schreyer et al., 2019). Additionally, natural language processing has been increasingly applied in forensic accounting to analyze textual data from financial reports, audit statements, and corporate disclosures (Faccia et al., 2024). The ability to detect deceptive language and financial misstatements has provided an additional layer of analysis, complementing numerical fraud detection techniques and improving the overall reliability of forensic investigations (Fay & Negangard, 2017)

Despite the numerous advantages of AI-driven forensic accounting, several challenges remain. One of the primary concerns is the quality and reliability of financial data used to train AI models (Metallo, 2020). AI-based fraud detection heavily depends on structured and high-quality datasets, and any inconsistencies or biases in the data can significantly impact the accuracy of fraud detection results (Sood et al., 2023). Additionally, AI-driven models often function as "black boxes," making it difficult to explain how fraud detection decisions are made. The lack of transparency in AI-driven decision-making raises concerns in legal and regulatory contexts, where forensic accountants must justify their findings (Metallo, 2020). Regulatory bodies have emphasized the importance of AI interpretability, advocating for the development of explainable AI models that provide traceable and auditable results (European Commission, 2023). Furthermore, ethical considerations in AI forensic accounting have become a key area of discussion, with concerns surrounding biases in AI models, data privacy, and the potential misuse of AI-generated fraud detection reports (Sood et al., 2023).

While AI has demonstrated remarkable efficiency in fraud detection and financial investigations, human forensic accountants continue to play a crucial role in interpreting AI-generated findings, conducting investigative interviews, and ensuring ethical compliance (Fallen et al. 2025). AI is best utilized as a complement to human expertise rather than a replacement, as forensic accountants bring contextual understanding, professional skepticism, and legal knowledge that AI currently lacks (Albrecht et al., 2020). The future of forensic accounting is likely to be defined by a hybrid approach that integrates AI's analytical capabilities with human judgment, ensuring a balanced and effective strategy for fraud detection (Akhan, 2024). Additionally, emerging technologies such as blockchain are being explored as complementary tools to AI in forensic accounting, offering immutable financial records that enhance transparency and fraud prevention (Odeyemi et al. 2024). As AI continues to evolve, future research should focus on improving the interpretability of AI models, developing unbiased fraud detection algorithms, and addressing

regulatory compliance concerns to ensure responsible AI adoption in forensic accounting practices (Awosika et al., 2023).

Methodology

This study utilizes a quantitative research design to examine forensic accounting professionals' perceptions of AI integration in fraud detection. A structured survey was conducted between December 2024 and January 2025, targeting forensic accountants, auditors, AI specialists, and regulatory professionals in Albania. The questionnaire was distributed via professional networks, LinkedIn groups, and direct invitations, yielding 152 responses for statistical analysis.

The survey comprised four sections assessing different aspects of AI in forensic accounting. The first section collected demographic data, including profession, experience, and AI familiarity. The second explored AI usage in fraud detection, examining frequency, accuracy perceptions, and efficiency impact. The third compared AI and traditional forensic accounting, evaluating advantages, limitations, and the balance between AI and human expertise. The final section addressed ethical and regulatory concerns, covering AI-generated fraud detection, regulatory oversight, and AI-specific training needs.

Data analysis involved descriptive and inferential statistical techniques to identify trends and relationships. Descriptive statistics summarized respondent characteristics and AI perceptions using frequencies, percentages, means, and standard deviations. Pearson and Spearman correlation tests examined relationships between AI adoption, trust in AI reports, efficiency perceptions, fraud detection accuracy, experience, and AI-human hybrid model preferences. Chi-square tests identified significant associations between categorical variables such as AI usage, professional background, AI reliability, and ethical concerns. Regression analysis was applied where relevant to predict AI adoption attitudes based on experience, AI familiarity, and regulatory perspectives.

To ensure ethical compliance, respondents were assured confidentiality and data integrity. Participation was voluntary, responses were anonymized, and no personally identifiable information was collected. All data handling followed ethical research guidelines. By employing a structured, statistically rigorous methodology, this study provides empirical insights into AI's evolving role in forensic accounting, benefiting academics, practitioners, and policymakers.

Data Analysis and Main Findings

This section presents the results of the study, analyzing the survey data collected from forensic accounting professionals, auditors, AI specialists, and regulatory professionals. The findings provide insights into AI adoption, accuracy perceptions, trust levels, and ethical concerns in forensic accounting. By employing descriptive statistics, correlation analysis, Chi-Square tests, and regression models, this section

examines key trends and relationships, offering a comprehensive understanding of AI's role in fraud detection and its impact on forensic accounting practices.

Descriptive analysis

The survey of 152 professionals in forensic accounting, auditing, AI, and regulatory compliance provides insights into AI's role in fraud detection. Respondents ranged from newcomers to highly experienced professionals, offering a broad perspective on AI adoption, accuracy, trust, and ethical concerns.

Findings show that while 63% use AI tools in forensic investigations, 37% still rely on traditional methods. AI usage varies, with some integrating it daily and others using it occasionally. Hesitancy stems from implementation challenges, lack of familiarity, and concerns over reliability and interpretability. Some professionals remain cautious about AI's accuracy and effectiveness in detecting fraud. Perceptions of AI's accuracy are divided. Some respondents view AI as equal to or better than human forensic accountants, while others are skeptical, citing its limitations in assessing intent, interpreting complex financial behaviors, and understanding contextual elements. Many remain uncertain about AI's accuracy, highlighting reluctance to fully embrace AI-driven fraud detection.

Trust in AI-generated fraud detection is a key issue. Over a third of respondents are uncertain about AI's reliability, with many distrusting AI in forensic investigations. Skepticism is largely due to AI's lack of transparency, particularly its "black box" nature, making decision-making processes difficult to interpret. Given forensic accounting's legal and regulatory scrutiny, the inability to explain AI-driven outcomes remains a major challenge. Professionals are not yet ready to fully trust AI without human oversight.

Despite these concerns, AI is recognized for improving efficiency and scalability in forensic investigations. Many respondents agree that AI significantly reduces the time required to analyze large datasets and detect anomalies. However, AI is not seen as a replacement for human forensic accountants. Most support a hybrid approach where AI assists rather than replaces human experts. This preference reflects the belief that AI's analytical capabilities should complement human judgment, particularly in ethical compliance and final decision-making.

Ethical and regulatory concerns are also prominent. Many professionals highlight AI's lack of transparency, potential biases in machine learning models, and regulatory uncertainties as key challenges. AI models trained on biased datasets risk reinforcing financial discrimination or failing to detect certain fraud patterns. Moreover, forensic accountants operate under strict legal frameworks, raising accountability and compliance questions with AI adoption. These findings stress the need for explainable and transparent AI models that align with forensic accounting standards.

The accompanying visualization summarizes key survey findings, illustrating AI adoption trends, accuracy perceptions, trust levels, ethical concerns, and AI-human role preferences. While AI is increasingly integrated into forensic accounting, trust remains a barrier. A hybrid model, leveraging AI's analytical strengths with human expertise, remains the most widely supported approach to ensure both efficiency and accountability in fraud detection and forensic investigations.

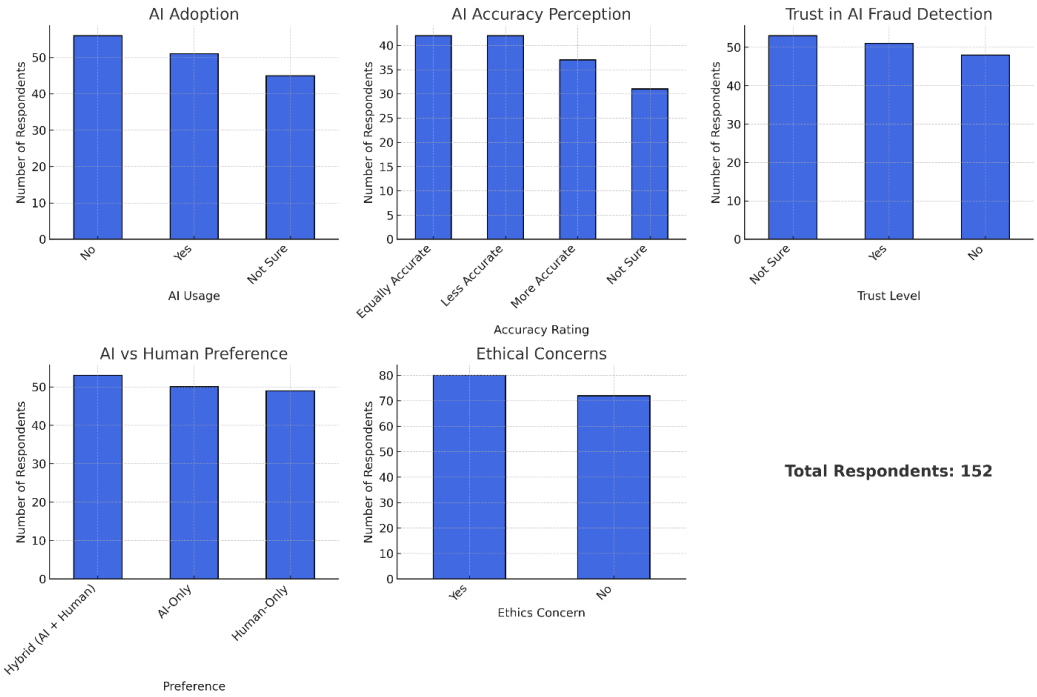

Figure 1. Summary of survey questions

Correlation Analysis of AI Perceptions in Forensic Accounting

Artificial intelligence is increasingly integrated into forensic accounting, yet its adoption remains complex due to varying trust levels, accuracy perception, ethical concerns, and professional preferences. To understand these factors, a correlation analysis was conducted to examine how they interact and influence each other. This study explores forensic accountants' trust in AI, their accuracy perceptions, and whether ethical considerations shape their preference for AI versus human-led fraud detection.

Most survey responses were categorical, including "Yes," "No," "Not Sure," and Likert-scale ratings. To facilitate statistical analysis, these responses were converted into numerical values, allowing relationships to be quantified and examined. With these numerical transformations, the dataset became suitable for correlation analysis using Pearson's correlation coefficient, a measure assessing the strength and direction of

relationships between variables. Pearson's coefficient ranges from -1 to 1, where values closer to 1 indicate a strong positive correlation.

The correlation matrix below provides a **quantitative overview** of relationships between AI trust, accuracy perception, AI preference, and ethical concerns.

Variable Pair	Correlation (r)	Interpretation
AI Trust Level vs. AI Accuracy Rating	-0.005	No significant correlation; trust in AI does not strongly depend on perceived accuracy.
AI Trust Level vs. AI vs. Human Preference	0.08	Weak positive correlation; those who trust AI slightly prefer AI-driven fraud detection, but the effect is minimal.
AI Accuracy Rating vs. AI vs. Human Preference	-0.03	Weak negative correlation; perceiving AI as accurate does not necessarily mean respondents prefer AI-only forensic investigations.
Ethical Concerns vs. AI vs. Human Preference	0.14	Weak positive correlation; those with ethical concerns slightly lean toward AI-human collaboration rather than AI-only solutions.
Ethical Concerns vs. AI Trust	0.02	No strong correlation; ethical concerns do not necessarily determine AI trust.

Table 1. Correlation Matrix Table

Trust in AI Is Not Dependent on Accuracy. The correlation analysis reveals that trust in AI does not strongly correlate with its perceived accuracy (-0.005). This suggests that forensic accountants evaluate AI based on more than just its ability to detect fraud, considering factors like transparency, interpretability, and regulatory compliance. Even if AI delivers accurate results, its trustworthiness is questioned if professionals cannot understand or explain its decision-making process. In forensic accounting, where legal accountability is critical, black-box AI models pose a risk in terms of admissibility and ethical responsibility. To improve trust, AI developers must focus on explainable AI (XAI) techniques, regulatory oversight, and transparent decision-making mechanisms.

Preference for AI vs. Human Collaboration Shows Minimal Dependence on Trust and Accuracy The weak correlation (0.08) between AI trust and preference for AI-led fraud detection indicates that trust alone does not determine whether professionals prefer AI-only investigations. Similarly, the weak negative correlation (-0.03) between AI accuracy perception and AI preference shows that even when AI is seen as highly accurate, professionals still favor human oversight. Fraud detection requires more than just identifying anomalies; it involves legal interpretation, professional skepticism, and an understanding of financial behavior—areas where

human expertise remains crucial. This explains why the hybrid model, where AI supports but does not replace human forensic accountants, remains the most widely preferred approach. AI enhances efficiency in data processing and pattern recognition, but final investigative decisions still require human judgment.

Ethical Concerns Influence AI Preference but Not Trust The weak positive correlation (0.14) between ethical concerns and preference for AI-human collaboration suggests that professionals who recognize ethical risks, such as bias, lack of transparency, and accountability issues, tend to favor a hybrid model. AI models trained on historical fraud data may inherit biases, leading to inaccurate fraud classifications or false positives. However, ethical concerns do not significantly impact overall trust in AI, as evidenced by the near-zero correlation (0.02). This indicates that while professionals acknowledge ethical risks, they do not necessarily distrust AI entirely. Instead, they advocate for regulatory safeguards, fairness testing, and increased explainability to align AI with forensic accounting standards.

In conclusion, the correlation analysis highlights that AI trust, accuracy perception, and ethical concerns are interrelated but not definitive predictors of AI acceptance in forensic accounting. Trust is shaped by broader considerations such as explainability and regulatory confidence rather than accuracy alone. The preference for AI-assisted investigations over full automation further reinforces the need for human oversight in forensic accounting. Ethical concerns strengthen the argument for regulatory frameworks and industry-specific guidelines to ensure responsible AI adoption. As AI continues to evolve, a balanced approach that combines AI's computational power with human expertise will be key to maintaining accuracy, efficiency, and accountability in fraud detection.

Chi-Square Test Analysis: Examining Relationships Between AI Adoption, Trust, and Ethical Concerns

To explore the relationships between key variables in AI adoption within forensic accounting, a Chi-Square test of independence was conducted. This statistical test examines whether two categorical variables are associated or independent among respondents. The objective was to assess whether factors such as AI usage, trust in AI, ethical concerns, and AI-human preference are statistically related.

The following **three key relationships** were tested:

Test	Chi-Square Statistic	Degrees of Freedom	p-Value
AI Usage vs. AI Trust Level	7.37	4	0.117
AI Usage vs. Ethical Concerns	1.47	2	0.478
AI Trust Level vs. AI vs. Human Preference	3.24	4	0.519

Table 2. Relationships tested

AI Usage vs. AI Trust Level (p = 0.117) This test examined whether professionals using AI in forensic accounting are more likely to trust AI for fraud detection. The p-value of 0.117 indicates no statistically significant relationship, suggesting that AI usage does not necessarily correlate with higher or lower trust in AI-driven fraud detection. This challenges the assumption that familiarity with AI fosters trust. Instead, factors such as regulatory concerns, ethical considerations, and AI transparency may have a stronger influence. These results align with previous correlation analyses, reinforcing that trust in AI is shaped by broader industry factors rather than individual exposure to AI tools.

AI Usage vs. Ethical Concerns (p = 0.478) This test assessed whether AI users in forensic accounting are more or less likely to express ethical concerns. The p-value of 0.478 indicates no statistically significant relationship, suggesting that concerns about AI ethics—such as bias, lack of transparency, and regulatory uncertainty—are widespread across both AI users and non-users. Ethical awareness appears to be industry-wide rather than limited to those actively engaging with AI tools. These findings highlight the need for standardized AI governance, fairness assessments, and interpretability improvements across the forensic accounting profession, rather than assuming that AI users are inherently more conscious of ethical risks.

AI Trust Level vs. AI vs. Human Preference (p = 0.519) This test explored whether professionals who trust AI are more likely to prefer AI-only fraud detection over a hybrid AI-human approach. With a p-value of 0.519, no statistically significant relationship was found. This means that even among those who trust AI, there is no clear tendency toward favoring AI-only fraud detection. Instead, forensic accountants continue to value human judgment, legal reasoning, and investigative expertise alongside AI's analytical capabilities. These results reinforce prior findings that AI is best suited as an assistive tool rather than a standalone fraud detection solution, supporting the preference for a hybrid AI-human model in forensic accounting.

The Chi-Square test results provide insights into the independence of key factors affecting AI adoption in forensic accounting. These findings suggest that AI adoption should focus on augmenting, not replacing, human expertise. Future AI development should prioritize transparency, legal compliance, and ethical safeguards to foster confidence in AI-driven fraud detection. The weak statistical associations between AI trust, ethical concerns, and adoption indicate that forensic accountants consider multiple factors, such as professional ethics, legal standards, and case-specific expertise, over AI accuracy or usage patterns. Moving forward, organizations should invest in training, regulatory compliance frameworks, and explainable AI (XAI) models to ensure AI remains a trusted and ethical tool in fraud investigations.

Regression analysis

To understand factors influencing trust in AI within forensic accounting, an Ordinary Least Squares (OLS) regression analysis was conducted. This analysis examined

whether AI accuracy perception, AI-human collaboration preference, and ethical concerns significantly predict trust in AI for fraud detection. Standardizing responses into numerical values allowed the model to identify trends, measure statistical significance, and assess relationships between variables, providing insights into AI trust among forensic accounting professionals and improving AI adoption strategies.

Dependent and Independent Variables

- **Dependent Variable:**

o AI Trust Level (Numeric) → Represents professionals' trust in AI-driven fraud detection.

- **Independent Variables:**

o AI Accuracy Rating (Numeric) → Reflects respondents' perceptions of AI's accuracy compared to human forensic accountants.

o AI vs. Human Preference (Numeric) → Captures whether respondents favor AI-only, human-only, or hybrid fraud detection.

o Ethical Concerns (Binary) → Indicates whether respondents have ethical concerns about AI in forensic accounting.

The regression model evaluates whether these factors significantly influence trust in AI and their contribution to variations in trust levels.

Using the OLS regression method, the model assesses whether AI accuracy perception, AI preference, and ethical concerns predict changes in AI trust. The general form of the regression equation is as follows:

$$AI\ Trust\ Level = \beta_0 + \beta_1\ (AI\ Accurancy\ Rating) + \beta_2(AI\ vs.Human\ Preference) + \beta_3\ (Ethical\ Concerns) + \in$$

Where:

β_0 is the **intercept** (constant), representing the baseline level of AI trust.

β_1 represents the **effect of AI accuracy perception** on trust.

β_2 represents the **effect of AI vs. human preference** on trust.

β_3 represents the **effect of ethical concerns** on trust.

ϵ is the **error term**, accounting for variability not explained by the predictors.

The **OLS regression analysis** generated the following key statistical outputs:

Variable	Coefficient (β)	Standard Error	t-Statistic	p-Value	Significance
Constant	0.4668	0.078	6.007	0.000	Significant
AI Accuracy Rating	-0.0012	0.031	-0.039	0.969	Not Significant
AI vs. Human Preference	0.0394	0.041	0.953	0.342	Not Significant
Ethical Concerns	0.0100	0.067	0.149	0.882	Not Significant

*Table 3. The **OLS regression** outputs*

Additionally, key model statistics include:

R-squared = 0.007 (The model explains only **0.7% of the variance** in AI trust.)

Adjusted R-squared = -0.013 (After adjusting for the number of predictors, the explained variance drops further.)

F-statistic = 0.3308 (Measures the overall significance of the model; a high p-value suggests the model is not significant.)

p-value for the overall model = 0.803 (Indicates that the predictors do not significantly explain the variance in AI trust.)

AI Accuracy Perception Does Not Significantly Influence AI Trust (p = 0.969) The regression analysis reveals that perceived AI accuracy has no meaningful impact on trust in AI-driven fraud detection. The coefficient for AI Accuracy Rating (-0.0012) is nearly zero, and the high p-value (0.969) indicates that any variation in trust due to accuracy perception is likely due to chance. This challenges the assumption that increasing AI accuracy automatically builds trust. Forensic accountants seem to prioritize transparency, explainability, and regulatory compliance over accuracy alone.

In forensic investigations, where decisions can have legal and financial consequences, professionals require AI systems that provide justifiable reasoning. Even when AI identifies fraudulent patterns correctly, forensic accountants may hesitate to trust its findings if the decision-making process is unclear. AI's lack of contextual understanding and legal accountability further explains why perceived accuracy does not directly translate to trust.

These findings suggest that efforts to enhance AI adoption should focus on explainable AI (XAI), improved regulatory compliance, and user-controlled AI decision-making rather than solely improving detection accuracy. Organizations should ensure that AI fraud detection systems align with legal standards and provide

forensic professionals with the necessary tools to interpret and validate AI-generated results.

Preference for AI vs. Human Collaboration Does Not Significantly Predict AI Trust (p = 0.342) The regression results indicate that preference for AI-only or hybrid fraud detection has little impact on AI trust. The coefficient (0.0394, p = 0.342) suggests a weak positive association, but the effect is statistically insignificant. Even professionals who favor AI adoption do not necessarily trust AI systems completely, reinforcing that trust is influenced by factors beyond professional preference.

Trust in AI is shaped by concerns about ethical risks, regulatory oversight, and system transparency. The findings challenge the assumption that those who advocate for AI adoption automatically have greater confidence in AI tools. Instead, forensic accountants may recognize AI's efficiency while still requiring human oversight for legal and contextual evaluation. The preference for AI-human collaboration over full automation highlights the importance of human expertise in forensic decision-making.

These results suggest that organizations should not only promote AI adoption but also focus on transparency, regulatory assurances, and accountability measures to foster trust in AI-driven fraud detection.

Ethical Concerns Do Not Strongly Influence AI Trust (p = 0.882) Surprisingly, ethical concerns have minimal impact on trust in AI-driven fraud detection. The coefficient for Ethical Concerns (β = 0.0100, p = 0.882) indicates that respondents who acknowledge AI's ethical risks do not necessarily trust AI less than those without concerns. This suggests that forensic accountants may recognize AI's potential biases and lack of explainability but remain willing to use AI tools as long as regulatory safeguards are in place.

This finding aligns with previous statistical tests, which showed that ethical concerns are more closely linked to a preference for AI-human collaboration rather than trust in AI itself. Professionals may advocate for AI oversight and ethical guidelines rather than rejecting AI entirely due to potential risks.

To build trust in AI, organizations should prioritize AI fairness, accountability, and transparency. Engaging forensic accountants in AI governance and allowing them control over AI decision-making can help bridge the gap between ethical concerns and AI adoption. Instead of solely mitigating ethical risks, AI developers should ensure that professionals have the ability to verify and override AI-generated fraud alerts when necessary, reinforcing trust and reliability in forensic investigations.

In conclusion, The regression analysis confirms that AI trust is not significantly influenced by accuracy perception, AI preference, or ethical concerns. This suggests that forensic accountants evaluate AI trustworthiness based on a broader range of considerations, such as regulatory alignment, transparency, and accountability.

To improve AI adoption in forensic investigations, organizations should focus on developing explainable AI models, ensuring regulatory compliance, and promoting ethical AI governance. The findings reinforce the need for a hybrid forensic model, where AI complements human expertise rather than replacing it.

By prioritizing trust-building strategies beyond technical accuracy, forensic accounting professionals can confidently integrate AI while maintaining ethical and legal integrity in fraud investigations.

Conclusions

This study examined whether artificial intelligence (AI) can replace human forensic accountants by analyzing key factors such as trust, accuracy perception, ethical concerns, and professional preferences for AI-driven fraud detection. Through a combination of correlation analysis, Chi-Square tests, and regression modeling, the findings provide valuable insights into how forensic accounting professionals perceive AI's role in fraud investigations.

The results suggest that trust in AI is not significantly influenced by its perceived accuracy, professional preference, or ethical concerns. While AI demonstrates remarkable efficiency in detecting financial anomalies, processing vast datasets, and identifying fraud patterns, forensic accountants remain cautious about fully relying on AI-driven decision-making. This reinforces the prevailing belief that AI should serve as an assistive tool rather than a standalone fraud detection system.

Furthermore, the study finds that even professionals who trust AI do not necessarily favor AI-only fraud detection, highlighting the continued preference for a hybrid approach where AI assists human forensic accountants rather than replacing them. Fraud detection requires more than just the identification of irregularities; it involves contextual interpretation, investigative reasoning, and legal judgment, aspects where human expertise remains irreplaceable.

Additionally, the regression analysis confirms that ethical concerns do not significantly reduce trust in AI, indicating that professionals recognize the benefits of AI but also demand explainability, regulatory oversight, and ethical safeguards. The presence of ethical concerns does not imply a rejection of AI but rather a need for systems that prioritize transparency, fairness, and legal compliance.

Ultimately, the findings suggest that while AI cannot fully replace human forensic accountants, it holds substantial potential to enhance efficiency, streamline fraud detection, and reduce workload by automating data analysis. However, forensic accountants continue to play an essential role in interpreting AI-generated fraud alerts, ensuring compliance with legal frameworks, and making final investigative decisions.

Recommendations

To improve AI adoption in forensic accounting while maintaining human expertise, AI-driven fraud detection tools must prioritize explainability and interpretability. Black-box models lacking transparency hinder trust and adoption, making it crucial to integrate explainable AI (XAI) features that allow forensic accountants to verify fraud alerts and apply human judgment effectively.

Regulatory and ethical safeguards are essential to mitigate biases and ensure fairness. Policymakers should establish governance standards, requiring audits of AI models for accuracy and compliance. Organizations must also implement internal monitoring protocols to prevent algorithmic biases from influencing decision-making.

A human-AI collaborative model remains the most effective approach, where AI aids in identifying fraud, but final decisions involve human oversight. AI-generated fraud alerts should undergo human validation before any regulatory or legal actions are taken. Firms should establish best practices to integrate AI as a decision-support tool, rather than an autonomous fraud detection system.

Enhancing AI literacy and professional training is crucial. Universities and certification programs should incorporate AI-related courses to help forensic accountants interpret AI-generated insights. This bridges the gap between AI's capabilities and human expertise, improving fraud detection accuracy and investigative integrity.

Continuous AI model improvement is necessary to prevent biases and ensure relevance. AI systems should be regularly updated with diverse financial datasets and evaluated for alignment with emerging fraud tactics and regulatory requirements.

Despite its potential, AI cannot fully replace human forensic accountants. Instead, it should be leveraged as a tool to enhance efficiency while preserving transparency, ethical integrity, and regulatory compliance. A hybrid approach, where AI complements human judgment, ensures a balanced and effective fraud detection framework.

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Inter-Indexer Consistency: An Analysis Method to Establish Links and Relationships Between Research Projects

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Abstract

Within the context of the organization of knowledge, the production that emanates from different types of research projects is included. The instruments applied in the organization of knowledge allow establishing relationships between concepts that reconstruct the conceptual structure of a specialized domain through accumulation and linkage. One of the situations that sparked debates and discussions regarding the subjective nature of indexing is the degree of agreement between two indexers when indexing information resources. Inter-indexer coherence refers to the degree of agreement that exists on the terms to be used to describe an information resource. Among these information resources, a very important one is the research projects produced at universities. These make up information resources in which each researcher responsible for them assigns a set of keywords that describe them thematically through natural language. That is to say, each of the class words assigned to each project constitutes an indexation through the natural language that constitutes an input for the analysis of scientific production from a qualitative aspect. This work proposes the application of analysis indicators in inter-indexer coherence (each project director) to establish trajectories and transversalities in scientific production in the field of universities as producers of knowledge.

Keywords: Interindexer consistency, Knowledge organization, knowledge production, indexing, research projects

A Retrospective Analysis of Oral Biopsies Obtained from Suspicious Lesions

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Abstract

Background/Aim: Even if it is possible to establish a clinical diagnosis for cancerous and pre-cancerous oral lesions, in most cases it is essential to perform a biopsy, which is a very effective diagnostic tool providing valuable information. The aim of this study was to evaluate and analyze the prevalence of various oral and maxillofacial lesions from oral biopsies and to discuss the results obtained. **Materials and methods:** A series of oral biopsies were collected from 112 patients during the year 2024 from the histopathological department, QSUT. Epidemiological and clinical histopathological data were analyzed retrospectively, recording data regarding age, sex, location of the lesions, biopsy types, anatomical and pathological diagnosis, and definitive diagnosis. **Results:** Of the 112 patients studied, their age varied from 5 to 81 years of age. The distribution by sex was 45.5% women and 54.5% men. The most common location was intraoral mucosa in 21.4% of cases. Cancer of the tongue accounted for 3.6% of cases. Malignant tumors like oral squamous cell carcinomas were the most frequent malignancy. **Conclusions:** The data presented in this study can be useful in making the right differential diagnoses. Also, it will be of particular significance to pathologists and general dental practitioners, reflecting the importance of oral biopsy.

Keywords: oral biopsy, oral cancer, pre-cancerous lesions, oral lesion.