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FRAMING IN INTERACTIONS: EXPERT WITNESSES' TESTIMONY IN THE ITALIAN JUDICIAL SYSTEM

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In a legal system that increasingly relies on scientific knowledge, expert witnesses have a critical role in criminal courts. However, experts have often reported feeling unsatisfied with their testimony. Also, the attorneys' style of questioning was found to impact jurors' impression of expert witnesses. This article preoccupies itself with the transformation of experts' testimony in the Court of Assizes. More specifically, it looks at the interactions involving the expert witnesses in the 2005 hearings held for the murder of the Ministry of Justice's advisor Massimo D'Antona. The paper analyses how lawyers shape expert witnesses' testimony and how expert witnesses present their opinion on the stand. Through Conversation and Discourse Analysis, it shows what discursive tools lawyers and expert witnesses use to simultaneously manage multiple frames, presenting scientific opinions to other parties (i.e., the judges, the parties involved, and the lay judges) throughout the hearings.

In un sistema giudiziario che si basa sempre più sul sapere scientifico, i Consulenti Tecnici (CT) hanno un ruolo fondamentale. Tuttavia, i CT hanno spesso riportato di essere insoddisfatti della loro esperienza in tribunale: è stato dimostrato come diverse tecniche di interrogatorio impattino il modo in cui il CT viene visto dalla corte. Questo articolo si occupa della trasformazione della testimonianza dei CT in Corte d'Assise. Più specificamente, analizza le testimonianze dei consulenti citati nel corso delle udienze tenutesi nel 2005 per l'omicidio del consigliere del Ministero della Giustizia Massimo D'Antona. Il documento analizza le tecniche usate dagli avvocati durante esame e controesame dei CT e come questi ultimi presentano la loro opinione in tribunale. Attraverso l'analisi conversazionale e del discorso, si dimostra quali tecniche retoriche gli avvocati e i CT utilizzano per gestire contemporaneamente più frame, presentando opinioni scientifiche ai giudici, alle parti coinvolte e agli avvocati durante l'udienza.

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1. *Introduction.* – In the courtroom, the expert advisor's role is to aid the judge/jury in the interpretation of evidence. The involvement of expert witnesses is a «necessary part of modern legal proceedings in a society increasingly influenced by science and technology»[1].

When appointed, an expert must present their opinion in a written document. Expertise reports do not constitute evidence — but have high probative value —, and since parties will likely bring conflicting reports in court, experts are commonly summoned as witnesses. Their testimony is given under the same rules as lay witnesses. However, each party has a particular interest in experts' testimony due to the higher probative value of their opinions. As such, their role in courtrooms is ambiguous[2].

Although extensive research has been done on the narrative of lay participants, the figure of the expert witnesses has been overlooked by both conversation (CA) and discourse (DA) analysis studies. The analysis of interactions involving experts on the stand differs from those that concern regular witnesses: e.g., experts are often allowed to expand their answers[3] but must rely on citation systems and bibliographical tools, which are not weighted during examination[4].

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[1] D. Winiecki, *The expert witnesses and courtroom discourse: applying micro and macro forms of discourse analysis to study process and the "doings of doings" for individuals and for society*, in *Discourse & Society*, 2008, 19, 6, p. 765.

[2] M. Suriano, *Prova Testimoniale e Consulenza Tecnica d'Ufficio*, reperibile in *Studio Legale Riccardo Riva*, https://www.studiolegaleriva.it/public/aggiunte/prova%20testimoniale %20e%20ctu.pdf, 15 dicembre 2021.

[3] G. Stygall, *A Different Class of Witnesses: Experts in the Courtroom*, in *Discourse Studies*, 2001, 3, 3, pp. 327–349.

[4] C. Bazerman, *How does science come to speak in the courts? Citations, intertexts, expert witnesses, consequential facts, and reasoning*, in *Law And Contemporary Problems*, 2009, 72, 1, pp. 91–120.

Much of the literature on expert witnesses' testimony[5] has used contextual frameworks to analyze court dynamics. Frameworks have been used to analyze experts' language outside courtrooms as well. For instance, Tannen[6] used knowledge schemas and frames to study interactions in the pediatric setting.

This article is preoccupied with the transformation of experts' testimony in courtrooms. Through a single case study, it looks at how lawyers shape expert witnesses' testimony while dealing with the issues that presenting scientific knowledge to an audience of non-experts entails. The analysis is carried out through a framework approach. It adds to the relevant literature by linking the framework analysis to CA and DA techniques related to the narrativization of testimonies in court.

The dataset consists of audio recordings from a 2005 series of hearings held in the Italian Court of Assizes for the murder of the Ministry of Justice's advisor Massimo D'Antona. The verbal interactions analyzed involve two expert witnesses: one (E1) appointed by the prosecution and one (E2) by the defense. Both experts are examined and cross-examined and asked their opinion about some of the ransom notes left on the crime scene.

2. *Literature review: frames and schemas in interaction.* – The term *frame* has been used in various fields ranging from anthropology to psychology. However, in linguistics, the notion of frame has its origins in the works of Bateson[7] and Goffman[8]. Although various studies approached defined frame differently from one another, here we consider Tannen's[9] definition: an interactive frame

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[5] See Y. MALEY, *The case of the long-nosed potoroo: the framing and construction of expert witness testimony*, in S. Sarangi, M. Coulthard: *Discourse and Social Life*, 2000, pp. 246–269, L. MATHER, B. YNGVESSON, *Language, Audience, and the Transformation of Disputes*, in *Law & Society Review*, 1980, 15, 3/4, p. 775, and WINIECKI, *The expert witnesses and courtroom discourse*, cit.

[6] D. TANNEN, *Framing in Discourse*, Oxford, 1993.

[7] G. BATESON, *A theory of play and fantasy*, in *Psychiatric Research Reports*, 1955, pp. 39–51.

[8] E. GOFFMAN, *Forms of Talk*, Amsterdam, 1981.

[9] TANNEN, *Framing in Discourse*, cit.

corresponds to the interpretation that participants give to a verbal exchange[10]. Unlike other researchers, Tannen[11] accounts for both «the stability of what occurs as a consequence of the social context» and «the variability of particular interactions emerging from the emergent nature of discourse»[12]. I.e., to identify shifts in more general structures (i.e., frames), Tannen[13] uses cues found in specific interactional contexts.

Moreover, Tannen and Wallat[14] distinguish between interactive frames and knowledge schemas. During interactions, participants need to make sense of utterances and non-verbal cues. Framing (i.e., interpreting) interactions help them in doing so. It is worth noting that interactions may involve multiple framing levels. For example, participants' misunderstanding may trigger a switching in frames. Without frames, however, interactions would make no sense.

Knowledge schemas, on the other hand, can be identified as the «expectations about people, objects, events, and settings in the world»[15]. Participants need knowledge schemas to interpret frames correctly. The information contained in a single interaction might not be sufficient to understand its broader context. Each individual disposes of a set of pre-existing knowledge schemas associated with specific non-verbal and verbal cues.

Tannen and Wallat[16] have used frame theory to analyze experts' language in the medical setting. The study looked at verbal interactions between a pediatrician, a child, and the child's mother during a medical exam, focusing on

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[10] For instance, consider two friends talking to each other. During their interaction, they might utter words deemed offensive. However, if both friends interpret the interactive frame as joking, single elements occurring within that interaction will be interpreted according to that same frame (i.e., the joking frame). Thus, the seemingly offensive words are not interpreted as accusatory but as humorous. Indeed, frames are dynamic structures.

[11] TANNEN, *Framing in Discourse*, cit.

[12] Ivi, p. 58.

[13] Ivi, pp. 55-60.

[14] D. TANNEN, C. WALLAT, *Interactive Frames and Knowledge Schemas in Interaction: Examples from a Medical Examination/Interview*, in *Social Psychology Quarterly*, 1987, 50, 2, p. 205 ff.

[15] Ivi, p. 60.

[16] Ivi, p. 60 ff.

understanding the relations between knowledge schemas and interactive frames in such a context[17]. Although Tannen and Wallat's[18] approach has not been used for courtroom interaction, the study aimed at providing «a model that can be applied in other contexts as well»[19]. The medical setting is a domain-specific context where the pediatrician is the more powerful participant. As professionals, they must address different participants at the same time, balancing three diverse interactive frames[20].

Tannen and Wallat's[21] analysis has demonstrated two significant points. First, the pediatrician used specific linguistic and paralinguistic tools to manage interactive frames. E.g., the physician signals the change of frame through a switch in linguistic register, using a technical one to address the experts watching the videotape and a playful one to talk to the child. Secondly, incongruent schemas may cause frame switching[22]. Each individual carries different knowledge schemas associated with specific verbal cues. If those cues are misused by one of the participants, an involuntary shifting in frames might occur. However, frameshifting (both voluntary/involuntary) might lead to what Tannen[23] calls «conflicting frames», that is frames that have different demands in conflict with one another.

Like the medical setting, the courtroom is a domain-specific environment. As such, it presents its own set of rules and characteristics. By drawing a comparison with the pediatrician's examination, I here consider the examination of witnesses in court. The interactions occurring within the

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[17] Note that the tapes analyzed in the study were initially meant as educational material for future pediatricians.

[18] TANNEN, WALLAT, *Interactive Frames and Knowledge Schemas in Interaction*, cit.

[19] Ivi, p. 58.

[20] Examining the child, giving an account to the mother, and giving an account to the future audience of experts.

[21] Ivi, p. 60 ff.

[22] Ivi, p. 61.

[23] TANNEN, *Framing in Discourse*, cit.

examination frame are regulated by both the examination process rules and the constraints imposed by the courtroom's broader context.

Like pediatricians, lawyers are professional agents in the legal setting. Thus, they occupy a position of power within the courtroom. During the examination, attorneys influence witnesses through a set of tools made available by the context (e.g., the right to question) to «present their version of the events to the judge»[24]. What this implies is that legal professionals are effectively managing more than just one frame. Thus, like the pediatrician, the lawyer must act within three different frames involving other participants and demands.

The first frame is the *examination frame*, which is one structured as a Question/Answer turn sequence between the examiner (i.e., the lawyer) and the examined (i.e., the witness). The second frame is the *institutional frame*, which is structured according to the courtroom rules. Like pediatricians need to adjust their lexicon for future professionals when recording teaching material, a lawyer has to address other professional agents (e.g., the other lawyers) using a domain-specific register. This frame aims to work towards the resolution of the legal dispute. The third frame is the *accounting frame*, where the attorney must interact with other lay parties. In this frame, they must be able to «communicate his/her interpretation of evidence to jurors»[25].

Each frame is associated with different demands depending on the judicial systems within which the examination occurs. For instance, the presence of a judging panel in Italian Criminal Law (six lay judges and two professional judges) implies the second and third frames have shared demands that are separated in judicial systems where the judge is the only deciding institution.

Also, the courtroom is adversarial. Differently from the cooperative medical setting, interactive frames produced in the courtroom are likely to be conflicting. Moreover, the legal environment imposes numerous constraints on

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[24] T. Tkačuková, *The power of questioning: A case study of courtroom discourse*, in *Discourse and Interaction*, 2010, 3, 2, p. 51.
[25] Ivi, p. 50.

both professional agents and lay parties. Lawyers must then juggle between frames carefully. Although the examiner represents the most powerful participant in the examination frame they are not in the institutional one: the judge is. E.g., other parties' lawyers might identify an issue in the questioning sequence and object to the judge, therefore creating a new conflicting interactive frame. At the same time, they must also avoid involuntary frameshifting.

2.1. *Predicates: categorizing others.* – If knowledge schemas have such an important role, how are they expressed in interactions? Related to the notion of knowledge schemas is Sacks' Member Categorization Analysis (MCA)[26]. MCA is a tool that allows the analyst to interpret and explicate the categorization process. As reported by Day[27], subsequent studies have further developed different aspects of MCA. The initial focus on the categorization of individuals has shifted. Participants tend to categorize a wide range of things: each other, groups, other individuals, as well as things. They do so through category-bounded predicates that express characteristics that can be associated with a determined category.

In interactions, predicates acquire a normalizing function: they express what participants expect members of a specified category to do or be. As such, predicates are direct products of knowledge schemas and carry moral implications associated with prior knowledge of the world[28].

In the court, asking whether a witness considers something to be moral or normal is not allowed by the rules. Predicates allow attorneys to implicitly state

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[26] H. SACKS, G. JEFFERSON, *Lectures on Conversation*, I, Oxford, 1992.

[27] D. DAY, *Conversation analysis and membership categories*, in C.A. Chapelle: *The Encyclopedia of Applied Linguistics*, 2012, pp. 1–5.

[28] *Ibidem.*

what moral or normal is[29]. However, to be understood predicates must fulfill what Sacks[30] defined as Hearer's Maxim. Members of different communities hear predicates differently.

2.2. *The role of the expert witnesses.* – In Italy, each court has an experts' register. To enter it, experts must meet three requirements[31] (Table 1).

Table 1

Requirements for professionals to enter a courtroom's expert register.

Requirements
S/he (the expert) must have technical competence in one specific field (the one s/he chooses to register for).
S/he must be registered in the respective professional register/college.
S/he must have a clean criminal record.

Such requirements stress the importance of the expert as an impartial and independent figure. However, the conditions do not mention the methodology they should use for their analysis. Focusing on the expert's persona rather than on the method is commonplace in many judicial systems[32]. One exception is the US, where the methods used in expert reports must meet a series of requirements set by the Daubert rules[33].

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[29] WINIECKI, *The expert witnesses and courtroom discourse*, cit., p. 769, has highlighted the role of predicates in the courtroom: «[...] predicates are frequently found to be used implicitly to invoke a particular membership categorization which can then be subsequently used implicitly as if it is a truth in and on itself. Such claims of truth also have the potential to carry moral implications – not only the truth or falseness of a claim but its value in a system of rightness and wrongness».

[30] H. SACKS, E.A. SCHEGLOFF, G. JEFFERSON, *A Simplest Systematics for the Organization of Turn-Taking for Conversation*, in *Language*, 1974, 50, 4, p. 696.

[31] STUDIO UNGDCEC, *Guida alla Consulenza Tecnica d'Ufficio in sede civile e penale*, 2014.

[32] Y. MALEY, *The case of the long-nosed potoroo: the framing and construction of expert witness testimony*, 2020.

[33] BAZERMAN, *How does science come to speak in the courts?*, cit., p. 104 reports that once an expert witness enters a U.S. courtroom, its «science is 'authoritative' from the court's perspective» and «the need for any finer judgment is obviated» The Daubert standards

In the absence of such standards, experts' competence is often called into question. Their ideas are thus shaped by the «practitioners and institutions» according to what they believe to be «relevant, appropriate, and adequate»[34]. The need for a finer judgment constitutes an issue also for the examiner. Legitimizing an expert witness implies constructing predicates understood by members of the court. However, this presents additional challenges compared to lay witness's examination.

2.3. *Narratives v. Opinions.* – In the literature[35], experts' testimony is commonly referred to as 'opinion'. When referring to lay witnesses', scholars prefer to use 'narratives'[36]. Understanding the dichotomy between these terms is a fundamental part of grasping the difference in the analysis of expert and lay witnesses' testimony.

O'Barr and Conley[37] have highlighted that lay participants give testimony through colloquial terms and expressions. They do so because they are asked to report what they have witnessed, not what they think about it. Experts, on the other hand, express themselves differently. The reason for that lies in their role in the judicial system. Once they have written their report, they must communicate its technical content to the court[38]. Consequently, their testimony must account for scientific details. To account for such information means to

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guarantee that «expert witnesses are valued for their opinions, not, like lay witnesses, for their trustworthiness».

[34] W.M. O'BARR, J.M. CONLEY, *Litigant Satisfaction versus Legal Adequacy in Small Claims Court Narratives*, in *Law &Amp; Society Review*, 1985, 19 , 4, p. 661.

[35] This term has been used by BAZERMAN, *How does science come to speak in the courts?*, cit., M. COULTHARD, *The linguist as expert witness*, in M. Coulthard, A. Johnson, D. Wright: *An Introduction to Forensic Linguistics*, London, 2007, MALEY, *The case of the long-nosed potoroo*, cit., and WINIECKI, *The expert witnesses and courtroom discourse*, cit.

[36] J.M. ATKINSON, P. DREW, *Order in Court*, London, 1979, J. GIBBONS, *Language and the Law*, London, 1994, and O'BARR, CONLEY, *Litigant Satisfaction versus Legal Adequacy*, cit., use 'narratives,' 'stories' and 'account' interchangeably.

[37] O'BARR, CONLEY, *Litigant Satisfaction versus Legal Adequacy*, cit.

[38] COULTHARD, *The linguist as expert witness*, cit.

recur to «scientific discourse» defined as «a set of rhetorical acts like giving instructions, defining, classifying, exemplifying and so on»[39].

Following Bazerman[40], giving scientific opinions is problematic in the courtroom. Domain-specific knowledge is built through citation systems and bibliographical tools. During trials, however, «scientific conclusions are not drawn through scientific reasoning»[41]. Academic intertextuality is of no interest in the court because other participants are likely not able to understand it.

In terms of frameshifting, lawyers' management of frames is facilitated when examining lay witnesses. The everyday register used by lay witnesses is common to all participants in the courtroom. However, when expert witnesses are involved, attorneys must deal with domain-specific language. Experts do so because they are not accounting for events but opinions. Jurors, but also judges, might not be able to understand such a register. Thus, the expert witnesses' testimony requires further transformation to be understood.

3. *Data and method.* — The recordings on which the analysis is based are part of *Radio Radicale*'s online archive[42]. In 2005, twenty-four hearings were held for the murder of the Ministry of Justice's advisor Massimo D'Antona.

During the trial, seventeen defendants were being prosecuted as being associated with the terrorist organization known as Red Brigades. During the early two-thousands, the Red Brigades committed multiple political murders and terrorist attacks. The organization would often claim responsibility for its

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[39] M. NAOUA, *Specialized Discourse in Language Tests*, in *Les Discours Spécialisés : enjeux, descriptions et pratiques*, Gabes, 2016, p. 1, originally in H.G. WIDDOWSON, *Explorations in Applied Linguistics*, Oxford, 1979.

[40] BAZERMAN, *How does science come to speak in the courts?,* cit.

[41] Ivi, p. 104.

[42] For privacy reasons, video recordings are not available for this case. Thus, the analysis is based only on the audio recordings of the selected hearing. The names of participants and documents in the transcripts were not censored according to relevant legal rules and participants' will: they are considered public domain and do not need to be excluded from the transcripts.

actions through ransom notes. It was common for prosecutors to consult a linguistic advisor to be able to use these documents as evidence in court.

In this specific case, E1[43] (the prosecutor's advisor) wrote an expert report in which he stated that the ransom note found on the crime scene (*2 P P doc*) had been written by one of the defendants (D1). The claim was based on the linguistic comparison between *2 P P doc* and a text seized during a search in the defendant's house (*meti doc*). According to E2's report, E1's analysis was based on insufficient elements. Table 2 summarizes the abbreviations used in the trial transcript to indicate each participant.

Table 2

Abbreviations and corresponding participants in trial extracts

Defense	Prosecution	Judge	Witnesses
AD1 = defense lawyer 1 AD2 = defense lawyer 2 AD3 = defense lawyer 3 AD4 = defense lawyer 4 ADP = plaintiffs' lawyer E2= defense expert witness	PM1 = public prosecutor 1 PM2 = public prosecutor 2 E1 = prosecution expert witness	G= Judge	T1= witness 1 T2= witness 2 T3= witness 3 T4= witness 4 E1 = prosecution expert witness E2= defense expert witness

*Since the original transcript is obtained from an Italian recording, abbreviations used for the participants stand for the Italian denominations [AD = *avvocato difensore* (defense lawyer); C = *consulente* (expert witness); PM = *Pubblico Ministero* (public prosecutor); G = *Giudice Presidente Commissione* (Judge); T = *Teste* (witnesses)]. Participants are numbered by appearance order. The two experts are named E = *Esperto* (expert).

4. *Analysis.* – When transforming experts' opinions, lawyers must account for the challenges and demands imposed by each frame. In the analysis section, this article looks at the discursive tools that lawyers use to deal with such issues and to juggle between interactive frames. The following extract is taken from the beginning of the examination-in-chief of the prosecution's expert. PM2 is

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[43] Notably, E1 had previously been appointed by the prosecution in another criminal trial related to the Red Brigades. During that trial, of the defendants was shown to be the author and subsequently convicted.

examining E1. This interaction highlights the predicates and implications PM2 uses to legitimize E1's method. The data reflects what has been outlined in the theoretical sections. In Winiecki's[44] analysis of expert witnesses in the American judicial system, predicates were mostly used to categorize the expert witness. In the Italian judicial system, predicates are used to assess the method's quality. Note that the examination frame here is cooperative. As such, there is no adversarial intent in Extract 1.

Extract 1 (103–116)

Examination-in-chief of the prosecutor's expert (E1)

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1. PM2: Look are you aware of a previous analysis (in the legal
setting)
2. that used the same methods, on the ransom notes
3. for the murder of Mr. Tarantelli?
4. E1: Ehm yes it was the first analysis that me and the late
5. Mr. Medici did it together sometimes ago
6. Ehm we had been commissioned the comparison of some documents
written
7. by an associate of the red brigades in the context of that
trial, and
8. we had to compare them with the ransom note found on Mr.
Tarantelli's
9. body and we had established that there was a perfect
10. analogy and homology (between the authors of the documents)
11. I think it was the first analysis of that kind, that I can
12. recall
13. PM2: Right.
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Up until this moment, E1 has given a simple overview of the method he used to carry out his analysis. PM2's first question (1–3) is a knowledge question: it asks the witness if he is aware of any other case involving a linguistic analysis Unlike cross-examination, where the witness' answer may unintentionally imply something here it serves a different purpose. The initial phrase «are you aware of» introduces a fact of which E1 (as the prosecution's expert) is undoubtedly aware. The question makes sure not to suggest directly to the witness but also avoids the possibility of wrong implications in the answer.

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[44] WINIECKI, *The expert witnesses and courtroom discourse*, cit.

The fact introduced has two characteristics. First, the mentioned «previous analysis» is implicitly linked to E1 because he «used the same methods» (i.e., the method E1 used in the previous trial). Secondly, PM2 adds that the analysis has been made on a «ransom note.» These details introduce the first two predicates of E1's method. The method has already been used in a previous trial, and it has been used to analyze the same type of text.

As the author of the previous analysis, E1 is provided with two predicates that he can use in his answer (4–12). E1 starts his answer by saying that «it was the first analysis» that he did together with another expert advisor. By identifying himself as the author of the analysis in a previous case, E1 is categorizing himself as a member of the scientific community who has already been approved by another court. Then, E1 proceeds by explaining how the analysis of the ransom note for that case was carried out (5–8). In doing so, E1 uses terms that can be considered keywords[45] for this trial. Describing the analysis made in that context using words associated with the present trial, implicitly links it to the previous one. The method, identified as appropriate in an earlier case, becomes consequently suitable for the one at issue here. The second predicate introduced in PM2's turn is explicated, and E1 concludes his utterance (9–12) by stating the conclusion reached in that case.

The predicates and the implications associated with them are hearable to the judge and the lawyers in the institutional frame, as well as to the jurors in the accounting frame. Thus, before proceeding with the next question, PM2 adds a third-turn evaluation (line 13). «Right» is pronounced in a marked falling intonation and allows lawyers to comment on the previous turn positively and to move on to the next topic.

If well-constructed, predicates are a powerful tool that allows the examiner to shape the experts' opinions respecting the institutional and accounting frame demands. Extract 2 presents an instance of conflicting frames. E2 (the defense's

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[45] I.e., «red brigades», «documents», «comparison», and «homology and analogy».

witness) is cross-examining E1[46]. At the beginning of the cross-examination, E2 has asked E1 to quantify his method's success rate numerically. E1 replied that in some cases, it reaches a success rate of one hundred percent.

Extract 2 (846–866)

Cross-examination of the prosecution's expert (E1)

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1. E2: Could you please cite to me the relevant literature that
gives such high rates of success
2. because I don't think
3. there is any honestly
4. E1: I could start by citing the longstanding volume written
5. by Trumper
6. about sociolog- (1.3) about judicial sociolinguistics for
example.
7. E2: And in that book the authorship attribution is founded on
such
8. feeble elements with a one hundred percent accuracy rate?
9. Feeble, why would say feeble excuse me,
10. I say feeble because-
11. E1: This is a personal view eh.
12. This is a personal view of yours already
13. E2: Eh: are you familiar with David Holmes' study "Authorship
14. Attribution"?
15. E1: Yeah but look studie- ehm Trumper is an Italian
16. linguistics. despite his
17. Anglo-Saxon origins
18. E2: Yes
19. E1: Methodologies used for the analysis of other languages are
partially relevant
20. as you know, for the study of the Italian language
21. E2: Well a method should be universal theoretically speaking
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After E1's quantification of his method success rate, E2 (line 1) asks for the bibliography «that gives such a high success rate». E2 aims to dismiss E1's method. To do so, E2 poses questions that inquire about the literature on which the analysis is founded (1–2; 7–8). E2's questions seemingly establish the existence of bibliographical sources as typical for scientific work. The predicate invoked is that a method is proven as scientific by precedent studies E2 dismisses

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[46] I.e., the questioning is led by the defense expert witness. Although this is technically not allowed by the court rules, the judge grants the defense the permission to have E2 cross-examining E1. The reasoning behind it is that the matter at issue (i.e., authorship attribution) is confusing to the court: letting the defense expert witness lead the cross-examination of the prosecution's expert is an attempt to better clarify the object of examination.

E1's approach through two evaluations. The first one expresses the unlikelihood of a book/volume reporting «such a high rate of success» (2). The second casts doubt on the method's quality (8).

While E1 provides an answer to the first question (4–5), he does not accept E2's second evaluation (9). Although E2 took on the role of the lawyer in the cross-examination, he is not a professional agent of the court. As such, he is not aware of the formal rule of the examination process. Thus, E1 freely structures his turn as a question (9) to E2 challenging his evaluation.

This is not admissible during cross-examination. The use of predicates pertinent to members of the scientific community and explicit evaluations are not considered pertinent to the examination frame.

Like in the pediatric setting described by Tannen[47], a mismatch in knowledge schemas (expressed through predicates) then causes a switch in interactive frames. For that reason, E2 accepts E1's turn. Once the frame has switched from examination to dispute, E2 and E1 invoke two different predicates that can be classified as pertinent to what was previously defined as the «scientific community». E1 explicitly invokes his in lines 19–20. E1 uses E2's already established predicate to legitimize his method. Since the bibliography he cited (4–5) comes from an Italian author (15–16), his analysis is categorized as scientific because «methodologies used for the analysis of other languages are partially relevant». In contrast, E2 directly establishes the predicate that «a method should be universal» (21). The interactive frame has switched from examination to dispute: this new interactive frame contrasts the courtroom frame. First, turns are not structured as Question/Answer sequences. Secondly, the predicates invoked are hearable only for the examination participants (as members of the «scientific community»), but not for the court. This shows that

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[47] TANNEN, *Framing in Discourse*, cit., 1993.

experts' opinions must undergo transformation to be heard[48] and accepted by the court. The judge (G) acknowledges this briefly after (Extract 3).

Extract 3 (883–86)

The judge (G) addresses the question/answer sequence between the expert witnesses

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1.  G: Anyway let's try to go back to questions and
2.  answers that can be understood by us (the court)
3.  you should not have an academic dispute
4.  on your subject of interest, that we
5.  respect but we would like to-
6.  E2: Eh: sure
7.  G: understand also
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After the interruption, the judge addresses first the register issue (1–2). The experts used predicates and verbal cues not relevant to the court. Thus, G requires them to «go back to questions and answers that can be followed by the court». In line 3, G also mentions that the interactive frame has changed. He labels the interaction between E2 and E1 as «an academic dispute on your subject of interest» (58).

Invoking predicates allows lawyers to legitimize (or dismiss) experts' methods to other participants in the courtroom. Also, their implicational nature serves not to violate the rules of the institutional frame and not to cause a mismatch in schemas.

But how does PM2 make E1's testimony more understandable for the court? In the recordings, PM2 reformulates the precedent turn as a closed question or as a statement followed by a closed question. In extract 4, PM2 is examining E1.

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[48] Using Sacks' terminology.

Extract 4 (191–228)

Examination-in-chief of the prosecution's expert (E1)

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1.  E1: Yes right. I couldn't remember the letter but it is not
2.  not relevant I think
3.  turning to the document (named) Biagi ehm I had concluded in my
expertise
4.  at that time, that it can be attributed to the same
5.  author-issuer of the document D'Antona I mean of the document
D'Antona
6.  it is also a fundamentally unitary text
7.  in which however compared to
8.  in which however when compared to the previous document
D'Antona
9.  [missing line]
10. This leads to a series of hypotheses and consideration
11. This leads to a series of hypotheses and consideration
12. among which being the author of two documents the same
13. the author might have improved, or the hypothesis that I have
14. wrote in my report that there had been a reviewer who has
15. revised the textual distribution that in
16. Biagi is more fluent and neat, and that instead resulted in the
document
17. D'Antona, even if the syntax is the same
18. even if the textual elements are the same
19. (was) less clear
20. PM2: Right,
21. let's see if what you just said can be summarized in this way
22. the author of D'Antona (document)
23. is the author we call G for ease of arrangement
24. the author of Biagi (document) is the same of D'Antona
(document)
25. even if improved in some ways
26. E1: Yes
27. PM2: Or revised in some ways
28. and in any case the author of D'Antona and Biagi (documents)
29. Is surely different from the author named F
30. E1: Yes
31. that is the author of the previous Red Brigades documents
32. E1: Yes
33. PM2: Written in the year 1988 in which Ruffilli was murdered
and
34. of more recent documents, that is those discussed
35. in Trani's courtroom on June 14 1992
36. is it so?
37. E1: Exactly so, correct
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In this exchange, E1's first turn contains the answer to a previous question by PM2 inquiring if the author of the *D'Antona doc* named 'G[49]' was identifiable with other known authors of the Red Brigades. E1 is granted a significant turn to

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[49] Not to be confused with the Judge (G).

answer the question (lines 1–19). However, E1's answer adds more information than was requested.

First, the answer never refers to the author of *D'Antona* with the label 'G' indicated by PM2 in the questions. Instead, a less clear periphrasis is preferred («author-issuer» line 5). Then, in lines 6–10, E1 provides some of the characteristics of the analyzed document. However, the account contains some technical terms such as «textual distribution» and «expositive order» (line 9, line 10). In lines 11–19, E1 states the conclusion he has reached. However, he does not do so directly. E1 first describes one of the many hypotheses he has tested (11–13), then introduces the one described in his report (13–19). The first hypothesis mentioned is not relevant to the case but is included in the answer, regardless.

Like in Extract 2, PM2 adds a third-turn evaluation. However, «Ecco» is here pronounced with a slightly falling intonation, carrying a less affirmative meaning. What follows (21–36) is PM2's summary of E1's answers.

First, PM2 establishes that the periphrasis used by E1 («the issuer-author of D'Antona», line 5) indicates the author named 'G'. Then, in lines 24–27, he states the conclusion reached by E1 without mentioning the technical terms. Note that the distinction between the two hypotheses made by E1 (13–19) is here ignored. Both are introduced by «even if» which expresses the independence of the conclusion reached from the hypothesis chosen. At last, PM2 ends his summary by adding the information that was requested in his initial question but was not directly addressed by E1 (whether 'G' was identifiable with any known author).

Summarizing previous turns allows PM2 to (I) lead E1 to the wanted answer by outlining the critical parts of the answer while also eliminating the domain-specific terms and (II) avoid leading questions. The information has already been provided in the previous turn by E1, and it is not directly presented by PM2. Thus, the institutional frame demands are met, and no conflict is created between the frames.

PM2's turn ends with a closed question (line 36). Not ending his summary with a question will create a conflict in the examination frame, which demands the turns to be structured as a Question/Answer sequence.

5. *Conclusions.* — This article showed the application of frame theory and knowledge schemas to analyze legal interactions. More specifically, it identified Tannen and Wallat's[50] approach as suitable to describe how expert witnesses' opinions are shaped in courtrooms and identified three interactive frames (examination frame, institutional frames, and accounting frames). Then, it highlighted the significant issues and challenges lawyers face within each frame.

Special attention was given to: (I) the ambiguous role expert witnesses have in judicial systems that assess the scientific value of methods in court and (II) the constraints that the judicial setting imposes on the participants in terms of frames.

The analysis section presented two of the techniques that lawyers used to deal with them. Figure 1 offers a summary of the findings:

Figure 1

Summary of the identified issues and attorneys' techniques

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[50] DEBORAH, WALLAT, *Interactive Frames*, cit.

Predicates are used to implicitly legitimize the expert's method while also avoiding frame switching. Significantly, the comparison between professional and non-professional agents' use of predicates has shown that predicates that are not pertinent to the courtroom are rejected and cause frameshifting. When it comes to presenting expert testimony to the court, summaries simplify technical testimony. Also, they allow attorneys to avoid leading questions during the examination. Closed questions are added to the summary if the latter is not formed as a question to avoid creating a conflicting frame.

The frame approach allows the analyst to understand why specific techniques are used to shape experts' testimony and what functions they serve in the context of the courtroom.