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Grounds for Exemption from Criminal Liability? How Forensic Linguistics Can Contribute to Terrorism Trials

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Abstract
Drawing on Brown and Fraser's (in: Giles, Scherer (eds) Social markers in speech, Cambridge University Press, Cambridge, pp 33–62, 1979) framework for the analysis of communicative situations and Fuentes Rodríguez's (Lingüística pragmática y Análisis del discurso, Arco Libros, Madrid, 2000; in Estudios de Lingüística: Investigaciones lingüísticas en el siglo XXI, 2009. https://doi.org/10.14198/ELUA2009.Anexo3.04) model of pragmatic analysis, this paper examines three home-made recordings featuring some of the members of the terrorist cell responsible for the 2017 vehicle-ramming attacks in Barcelona and Cambrils weighted as evidence during the trial held between November 2020 and May 2021 in the Spanish National High Court. The aim of this qualitative analysis is to test whether the linguistic evidence available supports the allegation that the participation in these recordings by one of the accused, Mohamed Houli Chemlal, had been planned by his interlocutors. Results show, first, that the exchanges analyzed present features indicative of both spontaneity and (limited) planification. Second, that Houli makes key contributions to the unfolding of the interactions shown in the recordings and that he does so in a cooperative and apparently relaxed manner, which could at best provide only partial support to his allegations. It is claimed that forensic linguistic analysis can generate valuable insights within terrorism-related legal proceedings.

Keywords Criminal liability · Discourse analysis · Linguistic evidence · Terrorism · Trial

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1 Introduction. The 2017 Barcelona and Cambrils Terrorist Attacks

On 17 and 18 August, 2017, jihadist[1] terror struck Barcelona and Cambrils (in the southern Catalan province of Tarragona) in the form of vehicle-ramming attacks. In both locations, the vehicle-borne attacks were followed by melee attacks as some of the responsible individuals attempted to flee the scene on foot. A total of 16 pedestrians were killed and approximately 150 injured. Taken as a single attack, it is the second deadliest by jihadist terrorists in Spain after the bombings in Madrid in 2004. Five terrorists were shot dead by police during the events. Another one escaped and was killed by the police four days later in Subirats, a town located some 50 km away from Barcelona. Nearly four years after these events, on 27 May, 2021, three other men (Said ben Iazza, Driss Oukabir and Mohamed Houli Chemlal) were respectively sentenced to 8, 46 and 53 years in prison for offences including belonging to a terrorist group, possessing and manufacturing explosives in relation to their collaboration with the perpetrators of the attacks and the explosion of the group's headquarters, an abandoned house in the town of Alcanar, some days before the events.

Among the evidence weighted against the accused during the trial for the Barcelona and Cambrils attacks were linguistic data, such as messages exchanged by Driss Oukabir and his brother, one of the perpetrators, through social media platforms, as well as three video recordings taken on 14 August, 2017, (i.e., a few days before the attacks) by Mohamed Houli [40, 90]. These recordings show three of the perpetrators (Younes Abouyaaqoub, Mohamed Hichamy and Youssef Aallaa) in the group's headquarters, in Alcanar, as they work on explosives and threaten to use them against their enemies. Mohamed Houli's voice can be heard at different points throughout these videos.

In the first court hearings, Houli stated that he was coerced by the perpetrators into making these recordings and that he was under the influence of unknown substances when he did it. Furthermore, he claimed that his contributions to the conversations in the recordings had been planned beforehand by the terrorists. It should be noted that coercion and the use of substances are described as potential mitigating and exclusionary factors in Article 20 and 21 of the Spanish Criminal Code. Thus, these allegations might exempt Houli from criminal liability. However, at no point in this trial was an expert brought in to analyze or even comment on the linguistic evidence relating to the accused, even though it started on 10 November, 2020, and ended on the following 27 May, therefore lasting more than six months.

[1] Despite the observation that *jihadism* is a polysemous term and that it may contribute to the stigmatization of all Muslims because this term «fuse[s] terrorism with mainstream Islam» [84, p. 12] (cf. [28] or [80]), we use the term jihadism as defined in the current version of the *Diccionario de la lengua española* ("Radical ideological trend which advocates for the jihad", [75], our own translation), which prevents its application to individuals who have not become radicalized.

2 Terrorist Discourse and (Forensic) Linguistics

Various methods have been used to analyze linguistic productions by terrorists. Some have examined texts and recordings through a qualitative lens (e.g. [38, 54, 76, 77]). Others have resorted to more automated approaches (e.g. [1, 6, 61, 96]). And a growing number of studies combine the strengths of computerized tools and qualitative interpretations of the results (e.g. [16, 62]). Qualitative contributions to this area of research have examined the discursive strategies used in numerous channels through which jihadist ideologies are propagated, such as websites, public statements or the profiles of radicalized individuals on social networks, by means of semiotics, Systemic Functional Linguistics (SFL), Critical Discourse Analysis of ideological elements or feminist Content Analysis, among others.

In general, findings in qualitative studies suggest that discursive features of different forms of jihadist discourse include merging group and individual identities [77]; tailoring content to the addressees' perceived gender, and perpetuating a differentiation of the social roles of each gender [54] (see also [11] on gender differences in radicalized individuals online); a polarized worldview in which agents are ascribed to opposing parties, such as 'good' or 'bad', 'us' or 'them' [27, 29, 72]; elements that convey negative polarity and explicit judgment related to the authors' religious and moral standards [29]; legitimizing violence by drawing on moral principles (i.e., a particular understanding of the Islamic religion; [27, 29, 77]); and presenting the Muslim community as a victim of the 'West' (cf. [63, 64]), as a key element of a narrative that may lead radicalized individuals to take on the role of 'righter of wrongs' ([76]; cf. [52]).

As for works which apply computerized tools to productions by jihadist authors, these are commonly categorized as efforts towards the analysis, detection or prediction of radicalization [6]. Dedicated reviews of this literature are currently available (e.g. [32, p. 4–7]). As mentioned above, works that combine quantitative and qualitative approaches to study linguistic productions linked to extremism are on the rise. Some draw on one of these method types as a complement to their main approximation to the data. For example, [29] and Etaywe [30] can be described as mainly qualitative analyses supported by the use of computerized tools to identify frequencies and concordance lines, whereas [32] present a quantitative analysis based on automatic tools which integrates qualitative aspects from social science models into their theoretical framework. Nonetheless, in many studies, the importance of qualitative and computerized methods is more balanced, and it is the effective combination of the two that makes the key contributions of these works possible (note that some term their methodology a multimethod approach).

However, interest in the language of texts linked to terrorist activity exceeds descriptive and academic purposes. Further applications of social sciences, including linguistics (cf. [97]), to this type of textual productions include proving whether criminal acts have been committed through the use of language, such as incitement [73] incitement to genocide [9] or hate crime [22] and

offensive language crimes [66], to name a few examples from different jurisdictions. Indeed, the expertise of (forensic) linguists can contribute a wide array of insights relevant to threat and terrorism investigations. Linguistics has been applied to threat assessment (e.g. [37, 38, 85, 86, 88, 91]), profiling and authorship analysis in relation to terrorism (e.g. [1, 7, 23, p. 37–41, 59), and the analysis of the (psycho)linguistic features of mass attackers' (cf. [13, 48, 50, 58]) and terrorists' discourse (e.g. [42–44, 53]).

This paper aims to demonstrate that linguistics can be applied to samples related to terrorism also with the purpose of testing whether the linguistic evidence available supports allegations put forward by the parties involved in legal proceedings in hopes of altering the outcome of the process (e.g. obtaining a more favorable sentence). For instance, the grounds for exemption from criminal liability listed in Article 20 of the Spanish Criminal Code include psychic disorders which prevent the author of a criminal act from understanding that a deed is illegal and being under the influence of drugs (when this was not intended to facilitate the criminal act). The purpose of this paper is not to explore the claims reported above in detail, but to illustrate the potential relevance that the linguistic analysis of the texts or recordings weighted as evidence in terrorism trials can offer the trier of fact. Therefore, we focus on one of the issues raised in the first court hearings for the 2017 attacks, namely, the allegation that Houli's interventions had been planned.

3 Spoken Language and Spontaneity

Scholars have repeatedly advocated for the need to consider contextual factors, including speakers' identities and circumstances, to explain the linguistic elements present in discourse, including samples of spoken interaction (e.g. [21, p. 5]). The prototype of spoken interaction is usually identified with spontaneous conversation among peers [14]. Spontaneity, or lack of planning, thus arises as an essential trait of the informal language associated with such interaction ([70, p. 50; 95, p. 11].

As described above (Sect. 1) one of Houli's initial claims was that his contributions to the recordings had been planned by other participants. As evidenced by research, language use in interaction is complex and influenced by multiple interwoven factors (cf. [95]), including varying and unmeasurable degrees of spontaneity. Additionally, filmed interaction such as the one analysed here differs from unrecorded events since recordings, realistic as though they may be, are artifacts, i.e., products crafted by people. Recording entails making decisions as to when, what, and how to show what is filmed, which means that interactions captured in videos might be the result of different degrees of planning. Thus, without knowledge of how videos were designed, analysts should guard against the assumption that interaction in homemade recordings are spontaneous (or 'authentic') by definition. In this sense, [81, p. 146] refer to as the "the 'sleight-of-hand' characteristic of realistic appearances on the screen".

Assessing spontaneity in language is also difficult because of the many aspects of speakers' discourse which may or may not have been planned. [71] indicates that speakers may anticipate all or some of the social functions fulfilled

by discourse, and that well-designed segments may coexist with unplanned sequences. Even in cases when discourse is carefully designed (e.g. political speeches), speakers retain a certain degree of freedom in the moment of uttering their productions. In the absence of explicit disruption of preconceived discourse (e.g. evident changes in register or linguistic competence), identifying the precise appearance of improvisation in the use of language becomes, to say the least, a challenging endeavour.

Nevertheless, pragmaticians, discourse-oriented linguists and phoneticians have been attempting to describe informal registers and spoken language for decades (e.g. [15] or [68]). Concurrently, conversation analysts and interactional linguists have studied the mechanisms through which conversations unfold (like turn taking, sequence organization or repair) and "the linguistic practices that are fitted to particular social action formats" [47, p. 82–83]. Thus, a rich body of research conceptualises "linguistic practices as situated in the dynamic moment-by-moment unfolding talk" [34, p. 730] and deals with phenomena observable in spontaneous interaction (cf. [95, p. 4–11]), including the sequentiality of utterances [71], disfluencies at all linguistic levels [60, 82], repetitions [65, p. 195; 89], interruptions, overlaps [19], self- and other-initiated repair strategies, and the co-construction of interactional practices [34], to name a few. Crucially, we know that in spontaneous conversation turns are not allocated beforehand but instead participants negotiate who takes the floor on a turn-by-turn basis by identifying transition relevance spaces in each others' interventions as the interaction unfolds [78]. [95, p. 13–14] identifies nine features of conversation: multiple sources, determination of discourse coherence, language as doing, co-operation, unfolding, open-endedness, artifacts, inexplicitness, and shared responsibility.

Speakers' uses of these and other conversational strategies may fulfil different functions and respond to different cultural norms (e.g. [69], cf. [24]). For example, interruptions and overlaps may serve to exert power or convey rapport [19]. The analysis of white American corpora leads [71] to observe that in "relatively unplanned discourse" more than in planned discourse, speakers rely on the immediate context and on linguistic structures acquired early (e.g. deictic items), and tend to repeat and replace (parts of) their utterances. Due to the situated nature of interactions and the focus of most of these studies on particular conversations (required to provide detailed analysis of turn sequences) generalisation of the findings to whole speech communities is rarely attempted. Yet, interactional differences are observed in studies offering a cross-linguistic perspective on specific phenomena [21]. For instance, a few studies have focused on code-switching by speakers of Darija, i.e. Moroccan Arabic [57], and differences between speech acts performed in this Arabic variety and other languages, such as Spanish [2, 4, 12]. According to these authors, one of the most salient interactional differences between (Moroccan) Arabic and languages like German or Spanish is the much more common use of religious expressions in everyday exchanges in the former than in Western cultures (e.g. [5, 12]).

Table 1 Data analyzed. *Source*: Adapted from [44]

Participants	Recording	Length	Words in the transcript		Source: [26]	
			Total	Attributed to Houli		
Younes Abouyaaqoub Youssef Aallaa Mohamed Hichamy Mohamed Houli Chemlal	Video 1	00:05:20	493	83	Begins	00:50:40
					Ends	00:56:03
	Video 2	00:01:56	218	9	Begins	00:56:10
					Ends	00:58:05
	Video 3	00:00:51	120	19	Begins	00:58:18
					Ends	00:59:09

4 Methods

This paper aims to show that linguistic analysis may be of use to decision makers in terrorism investigations when allegations like those discussed above are made by the parties involved. The study presented here analyzes three homemade recordings screened during the trial for the 2017 terrorist attacks of Barcelona and Cambrils in search of linguistic evidence which supports or contradicts one of the allegations made by one of the accused, Mohamed Houli Chemlal, who claimed that his participation in these recordings had been planned by the other young men in the videos.

4.1 Data

The three recordings analyzed in this study were filmed a few days before the 2017 attacks in an abandoned house in Alcanar, in the province of Tarragona, by Mohamed Houli Chemlal. As shown in the videos and was later confirmed by the criminal investigation of the facts, this house was used as the headquarters of the terrorist cell responsible for the Barcelona and Cambrils attacks. The recordings were screened at trial, this was broadcast live by several media and since made publicly accessible online [26]. As [31, p. 122–123] remark, broadcasting trials and granting public access to courtroom happenings online "serves the important public function of making the justice system more transparent to the citizens it is supposed to serve". The recordings feature Youssef Aallaa, Younes Abouyaaqoub and Mohamed Hichamy, who participated and died in the attacks. Houli is never seen on camera, but his voice is heard throughout. These individuals appear to be manufacturing explosives as they address each other and the camera. Table 1 reflects the characteristics of the videos and their transcripts. The total word count for the monolingual transcripts includes extralinguistic information in curly brackets (e.g. *{Laughs}*).

Participants speak Darija, Spanish, Catalan and English in the recordings. Therefore, before the analysis, multilingual transcripts were obtained for each video. An experienced transcriber with high skills in the four languages was crucial in this step. Since we cannot speak Darija, these multilingual transcripts, however, were

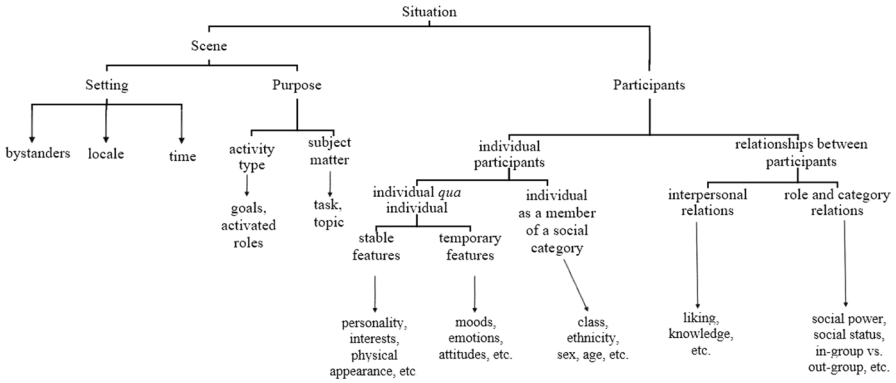

Fig. 1 Components of situation [17, p. 35]

transformed into monolingual Spanish versions for the analysis (both are accessible through [43]). The transcription criteria used were based on [39]. Following these criteria, doubtful utterances and speakers are provided in double brackets. For example, *((Houli)): ((Ah, falta)) Youssef* in line 5 of the first transcript signals that the first two words are likely those reflected on the transcript but could not be ascertained due to the poor quality of the video and that this utterance seems to be produced by Houli but, again, this is difficult to establish. (For more details on the transcription criteria, see [44]).

4.2 Methods

The data are analyzed in two steps from a pragmatic and discourse-analytical perspective. First, the communicative situation in which they are produced is examined through [17]'s model. As shown in Fig. 1, this model encompasses 'Scene' and 'Participants'. The former comprises 'Setting' and 'Purpose', and the latter relates to individual characteristics and relationships between speakers. The purpose of this analytical framework is to identify social markers, i.e., communicative devices which denote a relationship between linguistic forms (phonological, lexical, syntactic, etc.) and the external context (speaker, addressee, setting, purposes, etc.) relative to the internal context (phonological environment, meaning, function) in which they are used. This is difficult, however, because the link between linguistic features and social categories, as well as the influence of linguistic context, is not categorical but probabilistic, and because a given linguistic feature may convey several meanings simultaneously (e.g. it may index more than one social category). Thus, [17] suggest two conditions to facilitate the identification of relevant linguistic characteristics. One is to analyze only features (markers) with an emic status ("interlocutors in a particular culture actually attend to the presence or absence of *a* in situated interaction and come to conclusions about the social categories operative in the interaction on the basis of the presence or absence of the markers") and the other is to assume that "socially significant linguistic variations normally occur as varieties or styles,

not as individual markers" and therefore to focus on such sets of co-occurring, rather than isolated, linguistic features [17, pp. 38–39].

Since [17]'s model, pragmaticians have developed more complex theories and tools for the study of the interplay between context and language (e.g. [33, 94] or, from a cognitive approach, [92]). Although context undoubtedly plays a role in the use of language, it should also be noted that [67] and others make an interesting argument for intentionalism.[2] From an intentionalist perspective,

"[t]he way to settle the question of what an utterance was about is simply to ask the speaker, if we are in a position to do so. Trying to recall the various aspects of the context can at best provide us with good evidence for one possible interpretation, but cannot lift uncertainty the way a speaker's (sincere) report can" ([67, p. 2913]).

However, in areas of linguistic inquiry like forensic linguistics, it is usually not possible to access the speaker's "sincere report" of their intentions behind a given utterance. In contrast, examining linguistic features possibly linked to situational factors can unveil information that is useful for forensic purposes. In this sense, [17] postulate a model which conjugates speaker intentionality with contextual factors. In this model, "purposes are the crucial determiners of linguistic behaviour" ([17, p. 55]), which can be shown to interact, at the same time, with the other two major categories, 'Setting' and 'Participants'. These three elements can be explored in terms of the items identified to provide a fairly comprehensive analysis of the relationships between linguistic features and extralinguistic factors. Thus, even if admittedly simplistic in certain respects, this model of situation offers the advantage over other analytical frameworks (e.g. [51]'s SPEAKING model) of being specifically designed to help identify the relationships between linguistic and situational elements. Examining the communicative situation can be central to understanding language use, as [17, p. 58] conclude, since "even if one's primary interest is in participant-linked markers, many of those are either linked in turn to situation, or, on closer examination, prove to be markers not of participant per se but of participant in a particular situation".

The second step in this study consists in applying the model for pragmatic analysis put forward in [35, 36] to the three recordings and, specifically, Mohamed Houli's statements. This modular but comprehensive model combines textual linguistics, argumentation theory [3], the polyphonic theory of enunciation [25], speech act theory [8, 79], relevance theory [87], and ethnomethodology (more specifically, Conversation Analysis [78]). It is designed to tap into the interaction between linguistic mechanisms and situational factors and to arrive at a comprehensive understanding of the functions performed by such linguistic devices [36]. It comprises three analytical dimensions: the superstructure, the macrostructure and the microstructure. Enunciation and modality are seen as permeating the whole text, which is

[2] "According to this intentionalist picture, the content of the utterance corresponds to the content of the belief motivating it. On this view, the relation between the speaker's intention and the content of the utterance is constitutive, that is, the intention fixes the content of the utterance. Intentionalists regard an utterance as an intentional act of speaking (or writing, typing, etc.). […] Intentionalists regard the relation between contextual features such as background beliefs, purposes and presuppositions shared by the speaker and the hearer, and the content of the utterance as evidential." [67, p. 2911].

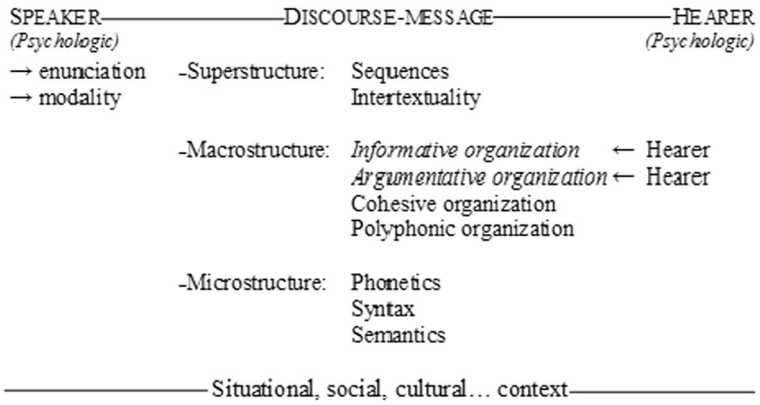

Fig. 2 Fuentes Rodríguez [35, 36]'s model for the pragmatic linguistic analysis of texts. *Source*: adapted from [35, p. 307; 36, p. 68]

to be understood only in relation to the wider situational, social and historical context in which it was produced (Fig. 2).

5 Results

5.1 Analysis of the Communicative Situation

The first element in [17]'s model is Scene, made up of Setting and Purpose. The recordings took place on 14 August, 2017, shortly before the attacks, in the house used as the headquarters of the cell. It had been occupied by these individuals for years, so that it constituted a private setting familiar to them. These recordings have multiple bystanders ("persons in the environment who are not taking part in the interaction" [17, p. 45]). Here (in contrast to [56, pp. 14–15]), *bystanders* refers to the projected but non-present recipients of the recordings. Firstly, there are the intended viewers who sympathize with the terrorists and those who do not, and, secondly, the police and legal professionals involved in the investigation and trial of the attacks. Participants show their awareness of these bystanders by referring to *hermanos* ('brothers'), *los enemigos de Dios* ('God's enemies') and even *vosaltres, Mossos d'Esquadra* ('you, the Catalan police force').

With regard to Purpose, by means of their interactions, the participants perform at least two simultaneous activities. They send a message to their two main addressees (those they view as their sympathizers and as their opponents) and they do so while chatting among themselves. Thus, their goals are, firstly, to obtain recognition from their sympathizers and instill fear among their opponents and, secondly, to strengthen their group cohesion, their identities as members of the group and their interpersonal relations. To reach these goals they activate different roles during their interaction, including that of "soldier" (by self-portraying as members of one of the two confronting parties in an armed conflict) or that of "fellow" (by showing

solidarity among themselves, e.g. by laughing or expanding another participant's contribution). Therefore, they complete several tasks. Their linguistic exchanges do not only constitute an informal conversation among friends but also a means of spreading a piece of news among their sympathizers and a warning to those perceived as their enemies. The subject matter is their intention of using the explosives they are preparing.

The second element in the model is the Participants. We know little of their stable and temporary features as individuals, aside from what is observable in the recordings. We cannot be certain, for example, of their personalities or interests. Yet, their participation in the videos and the events leads us to assume they shared, even though perhaps to varying degrees, an ideology characterized by an extreme and biased interpretation of the Islamic religion. Physically, the three individuals we see share traits like skin, eye and hair color, and dress in a similar informal fashion (t-shirts and trousers). Houli is never shown. Furthermore, we cannot access their internal mood or emotions, but, in the absence of a thorough analysis of their non-verbal communication strategies, it seems from their intonation and gestuality that those on camera do not appear sad or frightened but, rather, confident, calm and even happy at some moments in the videos. As for Houli, his voice sounds playful and relaxed rather than hesitant, fearful or slurred. Regarding the participants as members of society, they are all men of the same age (between 22 and 24 years of age), born in the North of Africa (in Morocco or the Spanish city of Melilla) but raised in mainland Spain (more specifically, in Catalonia) and appear to have similar levels of education and income [10].

The relationships between the participants are characterized by comradeship and an apparent absence of a hierarchy, traits typical of interactions among peers in informal settings [49, p. 368]. From a linguistic perspective, this horizontality can be observed in the absence of courtesy and formality markers, such as the personal V-pronoun (*usted*), in favor of the less distant T-pronoun (*tú*) in the Spanish interventions and the absence of courtesy address forms used in Darija to express respect to older or higher-ranked interlocutors [4, p. 190], or the lack of hedging through devices like *por favor* ('please') or *¿no crees?* ('don't you think?'). These would indicate an unbalanced relationship between the participants. In contrast, their exchanges show overlapping speech turns and mechanisms that convey solidarity (laughter, co-construction of the interaction, absence of negative feedback, etc.). The use of some of these linguistic devices may be attributable to cultural proximity between the participants, such as the use of the term *hermano(s)* ('brother(s)') in reference to each other and their addressees who are ideologically close to them. However, the criminal investigation revealed that the participants had known one another for years before the attacks (some had even attended the same school).

Alongside the horizontality and comradeship present throughout, the low sound and image quality also affects the identification of any hierarchy possibly operating within the group, since it hinders identifying the speaker responsible for a particular intervention, as reflected on the transcripts. Nevertheless, Hichamy seems to utter many of the speech turns, introduce several subtopics in the conversation, especially in the first video, and encourage other participants to speak (e.g. *Diles que les querías engañar* 'Tell them you wanted to fool them', line 24 in the first

transcript). Despite this, the recordings do not show any other signs of his possible authority over the rest of participants (e.g. speech acts like rebuking, correcting or disagreeing).

As for Houli, the specific object of this analysis, he actively contributes to the interactions from his position as cameraman by selecting who and what is shown on camera. This is clearly exemplified at the end of the first video (line 54 onwards on the transcript), when Houli leaves the others and shows the chemical products stored in a different room. His role, however, extends to that of an active participant in the conversation, as he also produces numerous speech turns and paralinguistic interventions throughout (namely, laughing and humming). Indeed, it is his interventions that mark the beginning of the recordings (see below). He also expands and reacts to other speakers' turns (for example, *Que miren cómo van a- a sufrir* 'Let them look at how they are going to- to suffer' in line 20 and *Gracias a Dios* 'Thank God' in line 34 of the first and *Y hace mucho daño* 'And it does a lot of damage' in lines 4 and 6 of the second transcript). Houli even poses questions to other participants (such as *¿Qué hace esto?* 'What does this do?' in line 8 of the third transcript) and seems to take the initiative as to what is to be shown in the recording while making an explicit comment about it (*Vamos a grabarlo de cerca* 'We'll take a close-up', line 16 of the third transcript). Thus, he participates actively and, seemingly, on an equal footing with the rest of speakers in the recordings. His interventions are analyzed in more detail and from a pragmatic linguistic perspective in the following section.

5.2 Pragmatic Linguistic Analysis of Houli's Participation in the Recordings

A detailed pragmatic analysis of the three recordings in full can be found in [44]. This study focuses on Houli's interventions to identify linguistic features that might support or contradict the allegation that his contributions to the videos had been planned (i.e. might not have been spontaneous). The following deals with the recording's super- and macrostructures, highlighting, when appropriate, the functions of any relevant lexical and morphosyntactic (i.e., microstructural) elements.

The first analytical dimension in the model is the superstructure of a text [35, 36], which has to do with its organization in sequences and its intertextuality. Sequences are units determined by the textual macro- and superstructure belonging to a given textual type. They can be narrative, expository, and instructional. Expository sequences may be descriptive or deliberative. The difference between descriptive and deliberative expository sequences lies in that the former present objects of reality, while the latter characterize a speaker's thought or opinion on a given topic. A previous study [44] shows that the predominant sequence types in the three interactions are deliberative and instructional, although narrative and descriptive sequences are also present. This predominance is linked to the recordings' goal of describing, from a subjective stance, the participants' future actions and the reasons thereof, their ideological convictions.

In the first video, Houli's first two speech turns constitute a descriptive sequence which introduces the other participants (*Aquí están los hermanos. Aquí está Younes* 'Here are the brothers. Here is Younes', line 1, and *((Ah, falta)) Youssef* '((Oh, I

skipped)) Youssef', line 5). Next, in line 15, he contributes to the first parenthetical sequence in which the participants discuss the recording (*Ah, pa' poder el vídeo, ir recortando, esto sí que vean cómo trabajáis eso* 'Oh, to be able the video, cut out, this yeah for them to see how you work on that'). He then intervenes in the mainly deliberative sequence ranging from lines 18 to 43. In line 20 (*Que miren cómo van a- a sufrir* 'Let them look at how they are going to- to suffer'), he completes a previous turn initiated by Youssef in line 18 (*Que miren, que miren cómo hemos hecho nuestros eeh-* 'Let them look, let them look at how we've made our uuh-'). In line 34, it seems to be him who responds *Gracias a Dios* ('Thank God') to another speaker's appeal to the audience (*((Alegraos))* '((Rejoice))' in line 33). After Younes' turn in line 52, in which he directly threatens the audience (e.g. *destruiremos a los enemigos* 'we will destroy the enemies'), Houli is possibly one of the speakers who utter *((Dios es el más grande))* ('((God is the greatest))') in line 53, just before he hums along to the nasheed playing in the background and leaves the others, who stay where they were as he walks into another room. The recording ends with a deliberative sequence in which Houli shows the chemical products stored in this other room and repeats religious expressions (*En nombre de Dios, en nombre de Dios, en nombre de Dios* 'In the name of God, in the name of God, in the name of God', line 57, *Alabado sea Dios, alabado sea Dios* 'Praise be to God, praise be to God', line 59). He also states *Si Dios quiere esto nos abrirá las puertas del paraíso* (()) ('God willing this will open the gates of heaven for us (())', line 61), before turning the light off, closing the door he opened to show the room and returning to the others. At different points in the video, he contributes to the interaction with paralinguistic mechanisms like laughter and humming (e.g. lines 44, 48 or 56).

In the second video, Houli's first intervention (*¡Vale!* 'Alright!', line 2) indicates to the other participants that the recording has begun and marks the intended beginning of the recording. Together with *En nombre de Dios, alabado sea y que la paz y la oración sean sobre el mensajero de Dios* ('In the name of God, praised be and peace and prayer be upon God's messenger'), uttered by Younes in line 3, it can be considered an instructional sequence, since it initiates the interaction between the participants and their audience. Then, in line 4, Houli contributes verbally to the first deliberative sequence, addressed mainly to the viewers who sympathize with the participants, by completing (*Y hace mucho daño* 'It does a lot of damage') Younes' intervention in line 3 (*Y esto- su presupuesto no supera los quince euros entre los quince y los veinte. Y…* 'And this- its budget is not more than fifteen euros between fifteen and twenty. And…'). In line 5, Younes produces a request for clarification (*¿Eh?*) and Houli repeats his previous intervention in line 6, which Younes accepts and takes up in line 7 (*Y hace mucho daño. Ya está, gracias a Dios* 'And it does a lot of damage. That's it, thank God'). Furthermore, Houli contributes to the second mainly deliberative sequence in this video, which consists of Hichamy's interventions in lines 10 and 12, directed at the part of the audience the participants construct as their opponents. However, Houli does not do so verbally but through laughter in line 11, in response to Hichamy's statement *El presupuesto de cada una no sé cuánto es porque todo lo que tenemos lo he traído de mi trabajo* ('The budget for each of these I don't know how much it is because everything we have I brought from my workplace', line 10).

In the last video, again, it seems to be Houli who marks the beginning of the video by interrupting the conversation the others apparently initiated before the recording began. He does so by asking *¿Qué hace esto?* ('What does this do?', line 8) in reference to the explosive belt Younes is wearing. Like in the previous recording, this is followed by Younes' request for clarification (*¿Ah?*, line 9), which invokes Houli's repetition of his question in line 10. Given its function of signaling the beginning of the recording, this sequence can be considered instructional. It is followed by a descriptive sequence, comprising from line 11 to 15, in which participants explain, mockingly, that what can be seen on camera are explosives (e.g. *¿Esto? Esto hace bum. {Se ríe}* 'This? This goes boom. {Laughs}', line 11). After this, Houli produces a short instructional sequence which can be considered a parenthetical remark about the recording (*Vamos a grabarlo de cerca* 'We'll take a close-up', line 16). Finally, he intervenes with *Ahora está bien, ¿no? // Te queda bien, ¿eh?* ('It's okay now, isn't it? // It looks good on you, hm?', line 21). This contributes to the last deliberative sequence, encompassing lines 17 to 23, where participants discuss Younes' appearance in relation to the explosive belt. The video ends with a short instructional sequence in line 24 (*(((Ah, tráeme a alguien que ((se inmole)) vamos))* '((Ah, bring me someone who ((sacrifices themselves)) come on))').

Still on the level of superstructure, we observe the presence of intertextuality in Houli's interventions. In the first recording, he repeatedly refers to the divine (e.g. *Alabado sea Dios* 'Praise be to God' and *Si Dios quiere* 'God willing', lines 59 and 61). Such references are very common in daily interactions in (Moroccan) Arabic (cf. [4, pp. 172–173, 5, 12]). Therefore, the uses observed here could be explained as cultural practices. However, given the content of the recordings (recall that Houli utters *Si Dios quiere esto nos abrirá las puertas del paraíso* (()) 'God willing this will open the gates of heaven for us (())', in reference to explosive products), it seems that these expressions adopt an additional layer of ideological meaning. In relation to this, note that jihadist individuals and organizations frequently cite fragments of the Quran or the Sunna that covers a divine mandate to fight the non-believers if they attack Islam in order to grant moral and religious legitimacy to the exercise of violence [55, p. 205]. As stated by authors like [98, p. 2], linguistic elements may be used to, directly or indirectly, "evoke ("index") social elements of the context in which and of the speakers by whom [they are] typically used" (see also [18, p. 378–379]). Thus, by making these religious references, Houli may not simply draw on the religious and jihadist texts he has possibly been exposed to before filming these videos to produce his interventions. Instead, by connecting the images shown on camera to the divine, Houli may be establishing a certain link between his utterances and those of other groups and terrorists with an ideology similar to that of the members of this cell by implying that the actions recorded respond to God's commands (*Si Dios quiere esto nos abrirá las puertas del paraíso* (()) 'God willing this will open the gates of heaven for us (())', line 61). Thus, he would signal his commitment to a particular ideology and claim membership of one or several communities (that of Muslims but also the in-group, the terrorist cell and, by extension, the international jihadist community).

The recordings' superstructure is interrelated with their macrostructure. This includes their cohesiveness, polyphony, information and argumentation structures,

which are realized by morphosyntactic, lexical and phonetic elements. As outlined in [44], the cohesive devices found across the videos are typical of unplanned spoken interactions (cf. Sect. 3). Many of these devices are found in Houli's interventions, including deictic elements (like *aquí* 'here' or *esto* 'this', in lines 1, 15, 46 and 61 of the first transcript), ellipsis (e.g. *y se vea en el vídeo bien* 'and [elided element] is well seen on the video' line 46 of the first transcript), the use of very few and simple connectors (e.g. *y* 'and' in *Y hace mucho daño* 'It does a lot of damage', line 4 of the second transcript), repetitions (like *Alabado sea Dios, alabado sea Dios* 'praise be to God, praise be to God', line 59 of the first transcript) and lexical cohesion. As in the videos more generally, in Houli's utterances the latter comprises the use of words from two main semantic fields: religion (e.g. *Dios* 'God' and *paraíso* 'paradise', in lines 34, 57, 59 and 61 of the first transcript) and armed conflict (e.g. *sufrir* 'suffer' in line 20 of the first transcript and *hace daño* 'does damage' in lines 4 and 6 of the second transcript). However, note that, in comparison to other participants' interventions, Houli makes little use of lexical units belonging to this last category and the elements in his utterances which do belong to it do not refer as directly to a framework of armed conflict as other lexical units utilized by his interlocutors (e.g. *granada de mano* 'hand grenade', line 10 of the second transcript, or *metralla* 'shrapnel', line 17 of the third transcript).

Cohesiveness is also achieved through grammatical agreement and consistency in the pronominal system and grammatical persons used in a text. Interestingly, Houli is not always consistent in the grammatical persons he uses to refer to the social actors he represents in discourse [93]. In general, the participants construct two antonymic entities in discourse through their consistent use of the personal pronouns *nosotros* ('us') and *vosotros* ('you$_{pl.}$') and the corresponding system of grammatical agreement [44]. Houli, however, does not consistently portray himself as a member of the in-group by using the first person plural.

In the first recording, Houli introduces other participants in the third person (*Aquí están los hermanos*. *Aquí está Younes* 'Here are the brothers. Here is Younes', line 1). This allows him to distance himself from the other participants and adopt the role of a mere voice-over, a narrator not directly involved in what is shown on camera. Similarly, in line 15, when discussing the recording itself, Houli contrasts his role of cameraman to the other participants' more active engagement in the preparation of explosives by using the second person plural in reference to his interlocutors and what they are doing (*que vean cómo trabajáis$_{[2nd.pl]}$ eso* 'let them see how <u>you</u>$_{pl}$ work on that'). Thus, he employs the third and second person plural to distance himself from the others.

Nevertheless, in other interventions, his use of grammatical persons shortens his distance from the rest. In the third video, as reflected in line 21 of the third transcript, he employs the second person singular T-pronoun *tú* to refer to another participant (*Te queda bien* 'It looks good on you'). As indicated above (Sect. 4.1), this form indexes familiarity or closeness between a speaker and his interlocutor. Even more in contrast to the uses observed above, Houli clearly portrays himself as a member of the in-group along with the other participants by using a first person plural pronoun on two occasions, one in the first and one in the third recordings (*Si Dios quiere* esto <u>nos</u> abrirá las puertas del *paraíso* 'God willing this will open the

gates of heaven for us', line 61 of the first transcript, and *Vamos a grabarlo de cerca* 'We'll take a close-up', line 16 of the third transcript).

As for the thematic progression in the recordings, Houli's interventions are central to the succession of information units in these exchanges. As noted above, his role of cameraman allows him to be the one who indicates the beginning of the three recordings by introducing his interlocutors (first video), and interrupting the others to let them know the recording has begun (i.e., that they should change their topic of discussion to what they want the videos to be about, as in the second and third videos). Furthermore, by completing other participants' unfinished turns in the first (*Que miren cómo van a- a sufrir* 'Let them look at how they are going to- to suffer', line 20) and third recordings (*Y hace mucho daño {ríe}* 'And it does a lot of damage {laughs}', line 4) and by filling the silence by humming along to the music playing in the background (lines 44 and 51 in the first transcript), Houli's interventions help keep the conversation going (i.e., avoid the thematic progression from stalling, cf. [95, p. 40]. Lastly, he also contributes to the unfolding of the conversation by introducing new topics. In the first recording, he controls the transition from the part in which the participants address their viewers to that in which he displays the chemical products stored in a different room (*{((Houli)) tararea. Se aleja de los demás, que se ve que siguen trabajando y hablando}* '*{((Houli)) hums. He moves away from the others, who seem to continue working and chatting}*, line 54). However, this happens after Younes directs himself to the audience in line 52 (*((Nosotros, con permiso de Dios, defenderemos nuestra religión y defenderemos nuestra doctrina y destruiremos a los enemigos (())* 'We, by leave of God, will defend our religion and will defend our doctrine and will destroy our enemies (())') and ends his statement with the religious expression *con permiso de Dios con permiso de Dios todopoderoso* ('by leave of God by leave of God almighty'). This seems to invoke the other participants' *Dios es el más grande* ('God is the greatest', line 53), after which Houli leaves the room (line 54) as the rest start a new conversation (line 55). In a sense, then, the ending of line 52 and the response in line 53 function like an adjacency pair and may be an indicator of the end of the exchange that the participants meant to show in the recording in a way similar to a farewell-farewell adjacency pair.

In the third recording, Houli also introduces new conversation topics verbally. After he succeeds asking *¿Qué hace esto?* ('What does this do?') in line 10, his interlocutors discuss the power of the explosives (e.g. *Esto hace bum* 'This goes boom', *((Los clavos están esparcidos))* '*((The nails are scattered))*, lines 11 and 15) until he shifts the topic in line 16 with his utterance *Vamos a grabarlo de cerca* ('We'll take a close-up'). This triggers other speakers' discussion of the elements that would accompany the explosives when they are put to use and which do not appear on camera (*Faltaría algo de metralla* 'It would be missing some shrapnel' and *((en el)) coches* '((in the)) cars', lines 17 and 18). This topic is replaced by that of Younes' appearance with the explosive belt again in response to an utterance produced by Houli (*Ahora está bien, ¿no? // Te queda bien, ¿eh?* 'It's okay now, isn't it? // It looks good on you, hm?', line 21). Therefore, Houli plays an active role in the management of the thematic progression of the three recordings.

The argumentative structure of the videos is characterized by the accumulation of convergent arguments and reformulations of the main theses [44]. Houli's

interventions contribute to this accumulation, which reinforces the messages conveyed in each video. In the first one, he reinforces the argument from authority that the participants' actions respond to God's commands through his references to the divine (e.g. *Alabado sea Dios* 'Praise be to God', line 59) and to the idea that *Si Dios quiere esto nos abrirá las puertas del paraíso* (()) ('God willing this will open the gates of heaven for us (())', line 61). In the second video, his main contribution to the argumentative structure consists in his statement that the explosives shown "do a lot of damage" (lines 4 and 6). In the third one, he contributes to the accumulation of convergent arguments leading to the conclusion that the participants are effectively prepared to put the explosives they are handling to use by introducing the topic of the explosives (*¿Qué hace esto?* 'What does this do?', lines 8 and 10) and by complimenting Younes as he wears this artifact (*Ahora está bien, ¿no? // Te queda bien, ¿eh?* 'It's okay now, isn't it? // It looks good on you, hm?', line 21).

From the perspective of enunciation, by foregrounding the divine in some of his utterances of the first recording (e.g. *En nombre de Dios* 'In the name of God' and *Si Dios quiere esto nos abrirá las puertas del paraíso* 'God willing this will open the gates of heaven for us', lines 57 and 61), Houli links the image of the chemical products scattered on the floor in one of the rooms in the cell's headquarters to a factor external to the participants, namely, the volition of an inaccessible entity allegedly responsible for their actions (cf. [5]). In doing so, he shifts responsibility for future events away from himself and the other participants and onto this figure. Additionally, the directness and high degree of commitment with the truthfulness of the locutionary act with which he enunciates his interventions about the explosives and their alleged connection with a divine entity (e.g. *Que miren cómo van a- a sufrir* 'Let them look at how they are going to- to suffer', *Alabado sea Dios* 'Praise be to God', lines 20 and 59 of the first, and *Hace mucho daño* 'It does a lot of damage', line 6 of the second transcript) contrasts with the disfluency and the insecurity conveyed by his utterances about the recording itself (*Ah, pa' poder el vídeo, ir recortando, esto sí que vean cómo trabajáis eso* 'Oh, to be able the video, cut out, this yeah for them to see how you work on that', line 15, or *((Abdul)), al menos aquí cuando coja la cámara y se vea en el vídeo bien* '((Abdul)), at least here when [an unspecified actor[3]] grabs the camera and is shown on the video well', line 46 in the first transcript). In contrast to the former, the latter contain false starts (*Ah, pa' poder el vídeo, ir recortando* 'Oh, to be able the video, cut out'), reformulations (*ir recortando, esto sí que vean cómo trabajáis eso* 'cut out, this yeah for them to see how you work on that') and hedges (*al menos* 'at least').

Some of Houli's interventions are clearly polyphonic. For instance, in line 20 of the first transcript, when he suggests an ending to the utterance of another speaker (*Que miren, que miren cómo hemos hecho nuestros eeh-* 'Let them look, let them look at how we've made our uuh-', line 18), he repeats part of this previous turn

[3] The subject of the verb form *coja* remains unclear. Grammatically, it could be a first or a third person singular verb form. Since the speaker is already holding the camera and this verb is used in reference to a future event, it may be that he is referring to someone else who would be in charge of the videos' post-production.

(*Que miren cómo van a- a sufrir* 'Let them look at how they are going to- to suffer'). This serves him to appropriate these words as his own and to make the relationship between his utterance and his interlocutor's explicit. Interestingly, code-switching is another linguistic device which allows Houli to take on 'different voices', that is, to make use of the different varieties he can speak (cf. [4, p. 176–177] or [57] on code-switching as a common practice among Darija speakers). These different voices seem to perform several functions. Firstly, to appeal to that part of the audience who also speaks these varieties and, secondly, using Arabic to utter religious expressions allows him to claim the identity of a 'true' believer of (a given interpretation of) the Islamic religion, which grants him legitimacy as a member of the in-group. This can be seen in line 61 of the first transcript, in which he employs both Darija and Spanish *Si Dios quiere*$_{[Darija]}$ *esto nos abrirá las puertas del*$_{[Spanish]}$ *paraíso*$_{[Darija]}$ ('God Willing$_{[Darija]}$ this will open the gates of$_{[Spanish]}$ paradise$_{[Darija]}$ for us$_{[Spanish]}$').

6 Discussion

The pragmatic linguistic analysis set out above has identified linguistic features in Houli's contributions to the recordings which are consistent with a certain degree of planning and also characteristics typical of unplanned informal exchanges. A few of his interventions also seem disfluent (e.g. *Ah, pa' poder el vídeo, ir recortando, esto sí que vean cómo trabajáis eso* 'Oh, to be able the video, cut out, this yeah for them to see how you work on that', line 15 of the first transcript). However, even though this last feature could be seen as a consequence of Houli's alleged exposure to unknown substances before the recording of the videos, it seems unlikely that, were this the case, only one or two of the 19 utterances he appears to produce in total would reflect this circumstance. Rather, it seems more fitting to consider these interventions as displaying features typical of spontaneity in spoken interaction [34, 45, 82, 89]. Additionally, the impact on the transcription process of the poor quality of the videos themselves and of the broadcasting of the court hearing in which they were screened should always be borne in mind, since, even though transcripts were carefully crafted and reviewed multiple times, they might not reflect all of the participants' utterances accurately.

As revealed in the analysis, Houli shows 'involvement' in the interaction in the sense of active participation put forth in [46]. His interventions contribute to the cohesion, polyphonic nature, argumentative dimension and, crucially, the thematic progression of the conversations in the videos. The analysis of the texts' superstructure has shown that Houli also intervenes across the different sequences that make up the recordings and that his contributions present intertextuality, like those of the other participants [44]. The transversality of his interventions, therefore, along with the fact that his utterances are produced in self-selected turns in the conversation and that he also resorts to paralinguistic devices (laughing at different points and humming along to the nasheeds playing in the background) seem consistent with his interventions being spontaneous [78, p. 710–712; 95]. The analysis shows that Houli's self-selected turns perform different functions in interaction: he finishes other

interlocutors' turns, poses questions which introduce new topics, reacts to other participants' turns, compliments other speakers and even manifests initiative as to what to include in the recording. Thus, Houli signals his ideological alignment with the other members of the cell in multiple ways throughout the interactions.

The lack of consistency identified in Houli's use of grammatical persons to portray himself as an insider or an outsider of the group formed by the other participants and the international jihadist community they represent may be related to and, therefore, indicate, the spontaneity, informality and multiple intended audiences of the recordings. It reflects the moment-by-moment unfolding of speech in unplanned interaction ([83] *apud* [95, p. 241]). Unlike in written communication, "in face-to-face interaction, participants in talk will go to almost any lengths to discover coherence in utterances they hear" [20, p. 43]. Therefore, Houli's changes in the use of grammatical persons do not affect the comprehensibility of his utterances. However, his use of multiple grammatical persons could also be due to the recordings having been planned to some extent, so that his own use of grammatical persons might differ from the one found in the utterances he does not produce spontaneously.

Furthermore, as observed in relation to enunciation, his utterances regarding the recording process show more uncertainty than those about the use of explosives, a difference which could also respond to different degrees of planning. Lastly, it could be argued that the expression repeated in line 53 of the first transcript (*Dios es el más grande* 'God is the greatest'), after Younes' threat in line 52, might have been used by the participants as a sign for Houli to leave the rest and record the chemical products stored elsewhere (but cf. the above discussion on the cultural dimension of such references to the divine in Arabic). This would mean that at least this fragment of the recordings would not be (entirely) spontaneous but, rather, had been planned before the recording started. The part of the intervention in line 55 that is comprehensible (*Ahora lo que hay que hacer* 'Now what needs to be done') would seem to support this claim, since one of the participants apparently indicates to the others what to do next (that is, once the previous exchange has concluded). This possibility contrasts with the linguistic traces of unplanned, informal conversation also identified in the recordings, as already discussed, and points to the possibility that the recordings are a product of both planning and spontaneity (cf. [71]'s argument for conceptualising spontaneity/planning in discourse as a matter of degrees and not a dichotomy).

7 Final Remarks

The pragmatic linguistic analysis performed has revealed indicators that Mohamed Houli's interventions may not have been entirely spontaneous but (somewhat) planned beforehand. This might lend some support to the allegation that he participated in the three videos examined under coercion. Nevertheless, this in itself is but feeble support, since many of the characteristics observed are typical of unplanned informal interaction among peers. He seems to participate in the exchanges on an equal footing with his interlocutors. He appears calm and engages in the co-construction of discourse without explicitly being invited to do

so, as evidenced, for example, by his laughter in response to others' interventions and the numerous self-selected turns in which he contributes to the interaction by completing his interlocutors' unfinished utterances or by introducing new topics in the conversation. These facts are not consistent with his participation being due to coercion. Rather, they seem to indicate a cooperative attitude and his involvement in the unfolding conversation. Thus, it seems possible that the participants had an approximate idea of the intended contents of the recordings before they took place, but their interaction, including Houli's interventions, shows linguistic traces of spontaneity.

The study presented here has exemplified how forensic linguistics may contribute not only to investigative efforts but also to court hearings in relation to terrorist activity. More specifically, it has shown how pragmatic linguistic analysis may be applied to evidence relevant for legal proceedings and aid decision-makers reach a conclusion regarding certain allegations put forward by the parties. Due to the grave impact of terrorism in contemporary societies, it is of paramount importance that fact finders and decision-makers are aware of the different sciences that can contribute to the prevention of and response to these criminal activities. Thus, forensic linguists must continue to engage in dialogue with criminologists and law professionals (e.g. [59, 74, 86]) to identify and visibilize the multiple areas in which their disciplines can complement one another.

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References

1. Abbasi, Ahmed, and Hsinchun Chen. 2005. Applying authorship analysis to extremist-group web forum messages. *IEEE Intelligent Systems*. https://doi.org/10.1109/MIS.2005.81.

2. Al Masaeed, Khaled. 2013. *Functions of Arabic-English Code-switching: Sociolinguistic Insights from A Study Abroad Program*. Ph.D. Dissertation. The University of Arizona.
3. Anscombre, Jean-Claude., and Oswald Ducrot. 1994. *La argumentación en la lengua*. Madrid: Gredos.
4. Anssari Naim, Saida. 2011. *The Speech Acts in Moroccan Arabic: An Intercultural Approach*. Ph.D. Dissertation. Universitat de València.
5. Anssari Naim, Saida, and Carlos Hernández Sacristán. 2015. Modalidad y discurso en inglés y árabe marroquí. Una perspectiva contrastivo-traductológica. *Language Design* 17: 35–56.
6. Araque, Oscar, and Carlos A. Iglesias. 2022. An ensemble method for radicalization and hate speech detection online empowered by sentic computing. *Cognitive Computation.* https://doi.org/10.1007/s12559-021-09845-6.
7. Aston University. 2022. *Linguistics Expert from Aston University Helps Police Scotland Secure Terrorism Conviction*. https://www.aston.ac.uk/latest-news/linguistics-expert-aston-university-helps-police-scotland-secure-terrorism-conviction Accessed 24 Mar 2023.
8. Austin, John Langshaw. 1978. *Logic and Language*. Oxford: Blackwell.
9. Badar, Mohamed, and Polona Florijančič. 2019. The Cognitive and Linguistic Implications of ISIS Propaganda: Proving the Crime of Direct and Public Incitement to Genocide. In *Propaganda and International Criminal Law: From Cognition to Criminality*, ed. Predrag Dojčinović, 27–62. Abingdon/New York: Routledge.
10. Bambú Producciones (producer) and León Siminiani (director). 2022. *800 Metros [documentary]*. Netflix. https://www.netflix.com/es/title/81275696 Accessed 24 Mar 2023.
11. Bermingham, Adam, Maura Conway, Lisa McInerney, Neil O'Hare, and Alan F. Smeaton. 2009. Combining social network analysis and sentiment analysis to explore the potential for online radicalisation. In *International Conference on Advances in Social Network Analysis and Mining*. https://doi.org/10.1109/ASONAM.2009.31.
12. Bouchara, Abdelaziz. 2015. The role of religion in shaping politeness in Moroccan Arabic: The case of the speech act of greeting and its place in intercultural understanding and misunderstanding. *Journal of Politeness Research.* https://doi.org/10.1515/pr-2015-0004.
13. Brindle, Andrew. 2018. *The Language of Hate: A Corpus Linguistic Analysis of White Supremacist Language*. New York/Abingdon: Routledge.
14. Briz Gómez, Antonio. 1995. *La conversación coloquial (Materiales para su estudio)*. Valencia: Universitat de València.
15. Briz, Antonio, and Grupo Val.es.co., ed. 2000. *¿Cómo se comenta un texto coloquial?* Barcelona: Ariel.
16. Brookes, Gavin, and Tony McEnery. 2020. Correlation, collocation and cohesion: A corpus-based critical analysis of violent jihadist discourse. *Discourse & Society.* https://doi.org/10.1177/0957926520903528.
17. Brown, Penelope, and Colin Fraser. 1979. Speech as a Marker of Situation. In *Social Markers in Speech*, ed. Howard Giles and Klaus R. Scherer, 33–62. Cambridge: Cambridge University Press.
18. Bucholtz, Mary, and Kira Hall. 2005. Language and Identity. In *A Companion to Linguistic Anthropology*, ed. Alessandro Duranti, 369–395. Oxford: Blackwell.
19. Cantrell, Lucy. 2013–2014. The Power of rapport: An analysis of the effects of interruptions and overlaps in casual conversation. *Innervate* 6: 74–85.
20. Coates, Jennifer. 1995. The Negotiation of Coherence in Face-to-Face Interaction: Some Examples from the Extreme Bounds. In *Coherence in Spontaneous Text*, ed. Morton Ann Gernsbacher and T. Givón, 41–58. Amsterdam/Philadelphia: John Benjamins.
21. Couper-Kuhlen, Elizabeth, and Margret Selting. 2001. Introducing Interactional Linguistics. In *Studies in Interactional Linguistics*, ed. Margret Selting and Elizabeth Couper-Kuhlen, 1–22. Amsterdam/Philadelphia: John Benjamins Publishing Company.
22. Culpeper, Jonathan, Paul Iganski, and Abe Sweiry. 2017. Linguistic impoliteness and religiously aggravated hate crime in England and Wales. *Journal of Language Aggression and Conflict*. https://doi.org/10.1075/jlac.5.1.01cul.
23. DANTE. 2019. *Detecting and ANalysing TErrorist-Related Online Contents and Financing Activities Recommendations for LEA: Improving Counter-Terrorism Intelligence on the Web*. https://cordis.europa.eu/project/id/700367/results. Accessed 24 Mar 2023.
24. Dingemanse, Mark, and Simeon Floyd. 2014. Conversation Across Cultures. In *The Cambridge Handbook of Linguistic Anthropology*, ed. N.J. Enfield, Paul Kockelman, and Jack Sidnell, 447–480. Cambridge: Cambridge University Press.

25. Ducrot, Oswald. 1984. *El decir y lo dicho*. Buenos Aires: Hachette.
26. El País. 2020. DIRECTO #17A | Comienza el JUICIO por los ATENTADOS de BARCELONA y CAMBRILS [Video file]. Youtube. https://youtu.be/U0qqZe3p3_U. Accessed 24 Mar 2023.
27. El-Nashar, Mohamed, and Heba Nayef. 2019. 'Cooking the meal of terror'. Manipulative strategies in terrorist discourse: A critical discourse analysis of ISIS statements. *Terrorism and Political Violence.* https://doi.org/10.1080/09546553.2019.1676238.
28. Esparza, José Javier. 2015. *Historia de la yihad. Catorce siglos sangrientos en el nombre de Alá*. Madrid: La Esfera de los Libros.
29. Etaywe, Awni, and Michele Zappavigna. 2021. Identity, ideology, and threatening communication: An investigation of patterns of attitude in terrorist discourse. *Journal of Language Aggression and Conflict.* https://doi.org/10.1075/jlac.00058.eta.
30. Etaywe, Awni. 2020. Organizational Involvement and Semantic Orientation as Realized in Threatening Terrorist Public Statements. In *6th International Conference of the Linguistic Association of Pakistan* 2020, 63. https://www.iclap.org/ICLAP2020/Book%20-%20ICLAP%202020.pdf.
31. Feigenson, Neal, and Christina Speisel. 2011. Jurors and the Courtroom of the Future. In *The Future of Evidence: How Science and Technology Will Change the Practice of Law*, ed. Jules Epstein and Carol Henderson. Washington, DC: American Bar Association.
32. Fernandez, Miriam, Moizzah Asif, and Harith Alani. 2018. Understanding the Roots of Radicalisation on Twitter. In *WebSci '18: 10th ACM Conference on Web Science*. https://doi.org/10.1145/3201064.3201082.
33. Fetzer, Anita, and Oishi Etsuko, eds. 2011. *Context and Contexts: Parts Meet Whole?* Amsterdam/Philadelphia: John Benjamins.
34. Fox, Barbara A., Sandra A. Thompson, Cecilia E. Ford, and Elizabeth Couper-Kuhlen. 2012. Conversation Analysis and Linguistics. In *The Handbook of Conversation Analysis*, ed. Jack Sidnell and Tanya Stivers, 726–740. Oxford: Wiley-Blackwell.
35. Fuentes Rodríguez, Catalina. 2000. *Lingüística pragmática y Análisis del discurso*. Madrid: Arco Libros.
36. Fuentes Rodríguez, Catalina. 2009. El análisis lingüístico desde un enfoque pragmático. *Estudios de Lingüística: Investigaciones lingüísticas en el siglo XXI*. https://doi.org/10.14198/ELUA2009.Anexo3.04.
37. Gales, Tammy. 2010. Ideologies of violence: A corpus and discourse analytic approach to stance in threatening communications. *The International Journal of Speech, Language and the Law.* https://doi.org/10.1558/ijsll.v17i2.299.
38. Gales, Tammy. 2011. Identifying interpersonal stance in threatening discourse: An appraisal analysis. *Discourse Studies.* https://doi.org/10.1177/1461445610387735.
39. Garayzábal, Elena, Sheila Queralt, Mercedes Reigosa, and Susana Ridao. 2019. La transcripción de registros de audio en el ámbito policial y judicial español: una propuesta de criterios. *Logos: Revista de Lingüística, Filosofía y Literatura.* https://doi.org/10.15443/RL2904.
40. García Bueno, Jesús. 2021. Condenados a penas de entre 8 y 53 años de cárcel los tres acusados por los atentados de Barcelona y Cambrils del 17-A. *El País*. https://elpais.com/espana/catalunya/2021-05-27/condenados-a-penas-de-entre-8-y-53-anos-de-carcel-los-tres-acusados-por-los-atentados-de-barcelona-y-cambrils-del-17-a.html?event_log=oklogin. Accessed 24 Mar 2023.
41. Gaviño Rodríguez, Victoriano. 2008. *Español coloquial: pragmática de lo cotidiano*. Cádiz: Universidad, Servicio de Publicaciones.
42. Giménez, Roser, and Sheila Queralt. 2021. Marcas ideológicas en el discurso de los terroristas del 17-A. *Al-Ghurabá* 46: 19–25.
43. Giménez García, Roser, and Sheila Queralt. 2023. La construcción discursiva de identidades de terroristas del 17A. *Boletín de Filología* 58 (1): 343–373.
44. Giménez, Roser, and Sheila Queralt. In press. Pragmatic linguistic analysis of the videos by terrorists of the Barcelona and Cambrils attacks. *Círculo de Lingüística Aplicada a la Comunicación*.
45. Ginzburg, Jonathan, Raquel Fernández, and David Schlangen. 2014. Disfluencies as intra-utterance dialogue moves. *Semantics & Pragmatics*. https://doi.org/10.3765/sp.7.9.
46. Gumperz, John J. 1982. *Discourse Strategies*. Cambridge: Cambridge University Press.
47. Hall, Joan Kelly. 2019. The contributions of Conversation Analysis and Interactional Linguistics to a usage-based understanding of language: Expanding the transdisciplinary framework. *The Modern Language Journal* 103: 80–94.
48. Hamlett, Laura. 2017. *Common Psycholinguistic Themes in Mass Murderer Manifestos*. Ph.D. Dissertation. Walden University.

49. Hidalgo Navarro, Antonio. 2003. Microestructura discursiva y segmentación informativa en la conversación coloquial. *ELUA (Estudios de Lingüística. Universidad de Alicante)*. https://doi.org/10.14198/ELUA2003.17.20.
50. Hunter, Madison, and Tim Grant. 2022. Killer stance: An investigation of the relationship between attitudinal resources and psychological traits in the writings of four serial murderers. *Language and Law/Linguagem e Direito*. https://doi.org/10.21747/21833745/lanlaw/9_1a3.
51. Hymes, Dell. 1972. Models of the Interaction of Language and Social Life. In *Directions in Sociolinguistics: The Ethnography of Communication*, ed. John J. Gumperz and Dell Hymes, 35–71. New York: Holts Rinehart & Winston.
52. Ingram, Haroro. 2016. An Analysis of Islamic State's Dabiq Magazine. *Australian Journal of Political Science*. https://doi.org/10.1080/10361146.2016.1174188.
53. Johansson, Fredrik, Lisa Kaati, and Magnus Sahlgren. 2016. Detecting Linguistic Markers of Violent Extremism in Online Environments. In *Combating Violent Extremism and Radicalization in the Digital Era*, ed. Majeed Khader, Loo Seng Neo, Gabriel Ong, Eunice Tan Mingyi, and Jeffery Chin, 374–390. Hershey: IGI Global.
54. Johnston, Melissa Frances, Muhammad Iqbal, and Jacqui True. 2020. The lure of (violent) extremism: Gender constructs in online recruitment and messaging in Indonesia. *Studies in Conflict & Terrorism*. https://doi.org/10.1080/1057610X.2020.1759267.
55. Jordán, Javier. 2009. Procesos de radicalización yihadista en España. Análisis sociopolítico en tres niveles. *Revista de Psicología Social*. https://doi.org/10.1174/021347409788041499.
56. Kerbrat Orecchioni, Catherine. 2004. Introducing polylogue. *Journal of Pragmatics*. https://doi.org/10.1016/s0378-2166(03)00034-1.
57. Kossmann, Maarten. 2012. Berber-Arabic code-switching in Imouzzar du Kandar (Morocco). *STUF Akademie Verlag*. https://doi.org/10.1524/stuf.2012.0023.
58. Kupper, Julia, and J. Reid Meloy. 2021. TRAP-18 indicators validated through the forensic linguistic analysis of targeted violence manifestos. *Journal of Threat Assessment and Management.* https://doi.org/10.1037/tam0000165.
59. Leonard, Robert A., Juliane E. R. Ford, and Tanya Karoli Christensen. 2017. Forensic linguistics: Applying the science of linguistics to issues of the law. *Hofstra Law Review* 45: 881–897.
60. Lickley, Robin. 2017. Disfluency in typical and stuttered speech. *Fattori sociali e biologici nella variazione fonetica - Social and biological factors in speech variation*. https://doi.org/10.17469/O2103AISV000019.
61. Litvinova, Tatiana, and Olga Litvinova. 2020. Analysis and Detection of a Radical Extremist Discourse Using Stylometric Tools. In *Digital Science 2019*, ed. Tatiana Antipova and Álvaro. Rocha, 30–43. Cham: Springert. https://doi.org/10.1007/978-3-030-37737-3_3.
62. Longhi, Julien. 2021. Using digital humanities and linguistics to help with terrorism investigations. *Forensic Science International.* https://doi.org/10.1016/j.forsciint.2020.110564.
63. Lorenzo-Dus, Nuria, and Stuart Macdonald. 2018. Othering the West in the online jihadist propaganda magazines Inspire and Dabiq. *Journal of Language, Aggression & Conflict.* https://doi.org/10.1075/jlac.00004.lor.
64. Lorenzo-Dus, Nuria, Anina Kinzel, and Luke Walker. 2018. Representing the West and 'non-believers' in the online jihadist magazines Dabiq and Inspire. *Critical Studies on Terrorism.* https://doi.org/10.1080/17539153.2018.1471081.
65. Méndez García de Paredes, Elena, and Elena Leal Abad. 2006. El lenguaje de los informativos entre la oralidad y la escritura(lidad). El telediario del 11-S. *Oralia* 9: 185–230.
66. Methven, Elyse. 2017. *Dirty Talk: A critical discourse analysis of offensive language crimes*. Ph.D. Dissertation. University of Technology.
67. Montminy, Martin. 2010. Context and communication: A defense of intentionalism. *Journal of Pragmatics.* https://doi.org/10.1016/j.pragma.2010.06.010.
68. Miller, Jim, and Regina Weinert. 1998. *Spontaneous Spoken Language. Syntax and Discourse*. Oxford: Oxford University Press.
69. Mithun, Marianne. 2012. Tags: Cross-linguistic diversity and commonality. *Journal of Pragmatics.* https://doi.org/10.1016/j.pragma.2012.09.010.
70. Narbona Jiménez, Antonio. 2018. *Sintaxis del español coloquial*. Sevilla: Editorial Universidad de Sevilla.
71. Ochs Keenan, Elinor. 1977. Why look at unplanned and planned discourse? *Discourse Across Time and Space. Southern California Occasional Papers in Linguistics* 5: 1–13.

72. Patterson, Katie J. 2022. Dualisms in Jihad. The role of metaphor in creating ideological dichotomies. *Journal of Language Aggression and Conflict*. https://doi.org/10.1075/jlac.00075.pat.
73. Pew, Bradley J. 2015. How to incite crime with words: Clarifying Brandenburg's incitement test with speech act theory. *Brigham Young University Law Review* 4: 1087–1114.
74. Queralt, Sheila, and Roser Giménez. 2022. Análisis lingüístico para establecer la existencia de coacción en el discurso de un acusado por los atentados del 17A. *Quadernos de criminología: Revista de criminología y ciencias forenses* 58: 2022.
75. Real Academia Española. Yihadismo. *Diccionario de la lengua española*. https://dle.rae.es/yihadismo. Accessed 24 Mar 2023.
76. Renaut, Laurène. 2019. Radicalisation djihadiste et discours victimaire sur les réseaux sociaux: de la victime au bourreau. *Argumentation et Analyse du Discours*. https://doi.org/10.4000/aad.3870.
77. Rothenberger, Liane, Kathrin Müller, and Ahmed Elmezeny. 2016. The discursive construction of terrorist group identity. *Terrorism and Political Violence*. https://doi.org/10.1080/09546553.2016.1180288.
78. Sacks, Harvey, Emanuel A. Schegloff, and Gail Jefferson. 1974. A simplest systematics for the organization of turn-taking for conversation. *Language*. https://doi.org/10.2307/412243.
79. Searle, John. 1980 [1969]. *Actos de habla*. Madrid: Cátedra.
80. Sedgwick, Mark. 2015. Jihadism, narrow and wide: The dangers of loose use of an important term. *Perspectives on Terrorism*. https://www.jstor.org/stable/26297358.
81. Sherwin, Richard K., Neal Feigenson, and Christina Speisel. 2007. What is visual knowledge, and what is it good for? Potential ethnographic lessons from the field of legal practice. *Visual Anthropology*. https://doi.org/10.1080/08949460601152799.
82. Shriberg, Elizabeth. 2001. To "errrr" is human: Ecology and acoustics of speech disfluencies. *Journal of the International Phonetic Association* 31 (1): 153–169.
83. Sinclair, John McH. 2001. Reviews of The Longman grammar of spoken and written English. *International Journal of Corpus Linguistics*. https://doi.org/10.1075/ijcl.6.2.09sin.
84. Smith, Angus. 2007. Words make worlds: Terrorism and language. *FBI Law Enforcement Bulletin* 76 (12): 12–18.
85. Smith, Sharon S. 2008. From violent words to violent deeds? Assessing risk from threatening communications. *The International Journal of Speech, Language and the Law*. https://doi.org/10.1558/ijsll.v15i1.105.
86. Solan, Laurence M., and Peter T. Tiersma. 2005. Threats. In *Speaking of Crime: The Language of Criminal Justice*, ed. Laurence M. Solan and Peter T. Tiersma, 198–211. Chicago: University of Chicago Press.
87. Sperber, Deirdre, and Dan Wilson. 1986. *Relevance. Communication and Cognition*. Cambridge: Harvard University Press.
88. Storey, Kate. 1995. The language of threats. *Forensic Linguistics*. https://doi.org/10.1558/ijsll.v2i1.74.
89. Tannen, Deborah. 1987. Repetition in conversation as spontaneous formulaicity. *Text* 7 (3): 215–243.
90. Teixidor Colomer, Anna. 2021. Sentència del 17A: l'últim capítol? *Notícies*. https://www.ccma.cat/324/sentencia-del-17a-lultim-capitola/noticia/3101537/. Accessed 24 Mar 2023.
91. Van der Vegt, Isabelle Wen-Li Johanna. 2021. *Linguistic Threat Assessment: Understanding Targeted Violence Through Computational Linguistics*. Ph.D. Dissertation. University College London.
92. Van Dijk, Teun A. 2008. *Discourse and Context. A Sociocognitive Approach*. Cambridge: Cambridge University Press. https://doi.org/10.1017/CBO9780511481499.
93. van Leeuwen, Theo. 1995. The Representation of Social Actors. In *Texts and Practices. Readings in Critical Discourse Analysis*, ed. Carmen Rosa Caldas-Coulthard and Malcolm Coulthard, 32–70. London: Routledge.
94. Verschueren, Jef. 2008. Context and structure in a theory of pragmatics. *Studies in Pragmatics* 10: 14–24.
95. Warren, Martin. 2006. *Features of Naturalness in Conversation*. Amsterdam/Philadelphia: John Benjamins Publishing Company.
96. Wignell, Peter, Kevin Chai, Sabine Tan, Kay O'Halloran, and Rebecca Lange. 2018. Natural language understanding and multimodal discourse analysis for interpreting extremist communications and the re-use of these materials online. *Terrorism and Political Violence*. https://doi.org/10.1080/09546553.2018.1520703.
97. Wilson, Richard Ashby. 2017. *Incitement on Trial. Prosecuting International Speech Crimes*. Cambridge: Cambridge University Press.

98. Zenner, Eline, Laura Rosseel, and Andreea Simona Calude. 2019. The social meaning potential of loanwords: Empirical explorations of lexical borrowing as expression of (social) identity. *Ampersand*. https://doi.org/10.1016/j.amper.2019.100055.

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