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Text Commenting in Mediatised Legal Discourse: Evaluating Reader Understanding of (International) Criminal Law

Michael S. Boyd and Isabel A. Walbaum Robinson

1 Introduction

With its complex syntax, archaic and foreign lexicon and age-worn expressions which symbolize and reproduce often ancient traditions, legal discourse can often appear bewildering to non-experts (Boyd 2013; Danet 1980; Jackson 1985, 1987; Sarcevic 1997; Walbaum Robinson 2011). To complicate matters even further, on the surface, many of the terms and expressions used in legal language often look exactly like ordinary language, but with very different meanings due to the presuppositions that the language makes about legal systems and the rules of law that these imply (Cao 2007; Jackson 1985). Such factors can lead to misunderstandings among non-experts which, in turn, may trigger misrepresentations of legal concepts and/or entire legal systems, especially when a foreign system (or systems) is involved. In addition, when analysing legal discourse, “cultural differences – especially distinctions in legal culture” are important and “outweigh any shared historic or geographic elements” (Walbaum Robinson & Spitzmiller 2009: 229). Hyland (1990: 39) highlights the complexity of ‘legal system’ as concept: “[e]ach legal system articulates the meaning of law and justice in a particular way. Wisdom in the law is not located within any particular understanding, but results rather from grasping all of these articulations at once”. The same author (Hyland 1990: 45) further notes, “[e]ach pursues a particular goal, which it might be useful here to call a *cultural*

project.” Distinctive contextual characteristics of a legal system, and language in which it is expressed, are key to understanding and correctly interpreting its distinct cultural project.

The present work is specifically focused on the representation of legal concepts in the online comments of news reports about legal issues and the role commenters take in the creation of these texts. Such comments are a mainstay of contemporary online newspapers, allowing users to share their ideas and opinions on important issues, including, of course, legal ones. In the literature, text commenting has been portrayed in a positive way as a means both to “expand the potential for text production” (Savoie 2009: 182) and to allow users to selectively recontextualize both text and discourse (Boyd 2014b). In their study of the ‘interactive opportunities’ available on newspaper websites Richardson & Stanyer (2011) demonstrate that, commenting behaviour varies depending on whether the newspaper is a tabloid or broadsheet. In their analysis, which was focused on the latter, the authors observed: “readers interacted with each other far more frequently, though here comments were often direct attacks on other discussants. Threads on the topics of immigration, race and religious difference were typically intemperate, used weak evidence, and frequently drew on racist unexpressed premises” (Richardson & Stanyer 2011: 19). Such attacks can also lead to users posting indiscriminately opinionated commentary on certain issues that commenters feel particularly strong about. This may lead to arguments being “used fallaciously with little justifiable connection between their standpoint and arguments, often driven by ‘unexpressed premises’ not strongly supported by evidence that result in *ad hominem* attacks on other discussants” (Richardson & Stanyer 2011: 19).

One of the goals of this study was to determine whether

such behaviour could also be observed in posts about legal issues. Thus, the corpus-based analysis focuses on recurring lexical items and patterns among commenters. The data were selected from an online comment forum (Comment is Free from The Guardian newspaper) posted in response to newspaper articles regarding the murder of British exchange student Meredith Kercher in Perugia, Italy, in November 2007, and the subsequent arrest, conviction and acquittal of American, Amanda Knox. Particularly, the work is interested in drawing out any lexical realisations that could be indicative of evaluative language. The underlying hypothesis is that lexical usage in comments regarding mediatised legal discourse can gauge users' evaluation and/or understanding of important legal questions and issues.

The comments used for the empirical study also provide an interesting case study for analysing readers' understanding and misunderstanding of legal issues. Since the crime was discussed at length by media outlets often in quite sensationalistic ways, it provided many opportunities for the public to comment online and also express their culture-based evaluations. This was corroborated by the fact that many arguments and opinions regarding the case were based on nationalistic lines that frequently led to ill-founded criticism about a foreign target (Italian) legal system in the source newspaper articles (Boyd 2013) and, subsequently, in the comments. In fact, many of the news reports and the ensuing comments were based on a rather incomplete understanding of the complexities of both the source Anglo-American and target Continental systems (Grande 2000; Mirabella 2012). The corpus-assisted lexical analysis was aimed at determining commenters' understanding (and apparent misunderstanding) of the legal issues involved in the case as well as perceived differences regarding legal concepts, trial procedure and uses

and misuses of the law. In §2 we discuss the most pertinent aspects of the case and introduce some important theoretical points about legal discourse.

2 The case and its theoretical foundations

2.1 The Case

On November 2, 2007, a British Erasmus student, Meredith Kercher, was found dead in her Perugia (Italy) apartment, covered by a duvet. Four days later, two students were arrested in connection with the murder, Kercher's American roommate, Amanda Knox, and Knox's recent boyfriend, Italian Raffaele Sollecito. They had been detained and interrogated in relation to the case and arrested almost immediately, only two days following the crime. They were held in prison for almost four years, while their case was tried in first-instance and appeals courts.

In October 2008, another man, Rudy Guede, originally from the Ivory Coast, but raised in Perugia, was convicted of sexually assaulting and murdering Kercher, and given a 30-year sentence through so-called fast-track proceedings. On appeal in December 2009, the sentence was reduced to 16 years. Meanwhile, in December 2009, both Amanda Knox and Raffaele Sollecito were convicted on charges of sexual assault and murder and sentenced to 26 and 25 years in prison, respectively. In appeals in October 2011, a panel of two professional and six lay judges (known in Italian as *giudici popolari*, or “people’s judges”) reversed the court’s decision, and Knox and Sollecito were acquitted.¹ Today, Guede is the

¹ This decision was later reversed in March 2013 in a surprise turn of events in which the Italian Supreme Court, or Court of Cassation, ordered the case reopened and retried beginning in September 2013, while Knox remained in the US. On January 30, 2014, the court of Florence returned guilty verdicts, effectively re-convicting and sentencing her to 28 years in prison. At the end of April 2014 the

only person serving a sentence for the Kercher murder.

Many aspects of the case, including the events surrounding the murder, the Italian forensic team's evidence collection procedures at the crime scene, police interrogation practices, the Italian "jury" system, the prosecution's behaviour and the sentences were brought into question in both news reports and, as we shall see, comments, dividing public opinion. For months, accusations were made in Italy and abroad in favour or against Knox's and Sollecito's guilt. Moreover, accusations and counter-accusations abounded in the mass media about Italy and its seemingly 'unjust' legal system. Many denounced the modality by which the evidence in the Perugia trial had been collected. And both sides vociferously hailed or criticized the legal systems and the actors within. As Annunziato (2011: 66) notes, after the eleven-month first-instance trial "jurors returned guilty verdicts against both Knox and Sollecito, while the public and reporters in Britain and the US were left under the impression that the prosecution had succeeded in unanimously convincing the panel of six laypersons and two judges of Amanda Knox's guilt".

2.2 Legal lexis and discourse

Legal language, as noted above, exhibits a number of important differences from ordinary language. One reason for this is that many legal items can denote metaphysical phenomena rather than physical ones (Bhatia 2010). Furthermore, certain lexical items have "technical legal meanings" which might be interpreted by a layperson in their common meanings or as part

court published its reasoning stating that it was Amanda Knox "delivered the fatal blow" to Meredith Kercher. At the time of writing Knox remains in the United States and Raffaele Sollecito has yet to be imprisoned (Davies 2014). The case was definitively decided on 27 March 2015, when both Knox and Sollecito's convictions were overturned by the Italian Court of Cassation, its highest ruling body.

of legal professionals' "habit of being verbose" (Stubbs 1996: 109). Another reason for this complexity is that lexical items in legal language are related to each other in different ways than in ordinary language, such that the language "may only, to the extent that it resembles ordinary language, appear to be intelligible to the layperson" (Jackson 1985: 47). Furthermore, legal language often reflects what Stubbs (1996: 104) calls "conflicting versions of reality" due to the fact that, at least in courtroom discourse, "the presentation of these versions is carried out at an abstract and formalized level". Moreover, there may be complications at the level of argument creating "rigid formats of legal argumentation", which when combined with technical legal lexis can make legal discourse "incoherent" to the lay public (Azuelos-Atias 2011: 43). We should not forget, however, that legal lexis is indicative of value and cultural-based preferences and choices which underlie differences in legal systems. These systems, in turn, are based on mental images (or frames) creating a vision of authority, an awareness of rights and a means to evaluate acts, decisions and laws (Villez 2010). Yet, misunderstanding can also arise from a "lack of knowledge of the system, rather than of individual lexical items" (Jackson 1987: 47). In his analysis of courtroom language, Stubbs (1996: 106) provides an insightful summary of the possible reasons for misunderstanding between legal professionals and the lay public:

Because the law relies on interpretation of language, the standards by which words are interpreted are inevitably different for the legal profession and the lay public, and it is inevitable that judge and jury will use language differently. People interpret discourse according to their own conventions, and it is therefore very likely that the jury are not always able to suspend their common-sense

interpretations of language in ways the court may require of them. This is another potential source of misunderstandings.

When more than one legal system and tradition are involved, as we shall see below in §2.3, it can be even more difficult to transpose notions from one system into another (Villez 2010), as elements taken from one source legal system cannot be easily transferred into the target legal system (Sarcevic 1997: 13). This system boundedness has implications for linguistic practices, so that “[e]ach society has different cultural, social and linguistic structures developed separately according to its own conditioning” (Cao 2007: 24). Therefore, it can be hypothesized that if non-experts do not have a full understanding of these systems they will be more likely to misrepresent important concepts of law, especially when a foreign legal system is being discussed. As discussed below in section §2.3, the Anglo-American common-law system is significantly different from the continental Roman-law system.

2.3 Italian criminal law

Mirabella (2012: [28] 230) suggests that much of the criticism arising in the US and UK press about the Italian justice system and its dealings with the Amanda Knox case may actually stem from misunderstandings about the differences “between concepts of ‘truth’ in common law and civil law systems of criminal procedure” as well as “from an imperfect comparison of fundamentally different criminal systems” (Boyd 2013: 7). After Knox and Sollecito’s conviction, the public frequently expressed strong opinions in favour or against both the verdict and sentencing voiced in various online comment fora. Most of the comments were far from neutral often providing strongly inaccurate comparative analyses of the legal systems and the

case itself. For instance, superficial comparisons were made of Italy's Criminal Procedure Code Reform of 1989 and subsequent amendments (Grande 2000; Mirabella 2012). Annunziato (2011: 67), for example, who monitored the reporting in the US media, observed a pattern of using "experts on various points of law or forensic science who attempt to discredit the case against Knox, without interviewing any experts who give an opposing perspective". This lack of opposing views, according to the same author (*ibid*: 69), "leaves the reader or viewer with a stilted version of events" and the belief "that the case against Knox is at best deeply flawed and at worst an example of malicious prosecution".

Three recurrent themes are reiterated throughout the newspaper reports about the case (as well as the comments that stemmed from these as we shall see in §4): forensic team inefficiency, police misconduct and unfair prosecution. Annunziato (2011: 71) stresses the international nature of the case as an important factor in influencing public (and media) opinion, which led to often unfounded criticism of a foreign legal system even though "standards applicable in the USA would not necessarily transfer to the Italian proceedings". Not surprisingly, such reporting often leads to misunderstandings, putting into doubt, as Mirabella (2012 230) notes, "whether proper comparative methodologies have been used in assessing how Italian criminal procedure relates to traditional adversarial systems". Mirabella (2012) further focuses on three elements at the core of the contentions surrounding the Perugia case. First, the Italian procedural code allows civil and criminal cases to be heard at the same trial. Furthermore, in the trial, unlike in the US or UK systems, three different cases were discussed: the criminal trial for the murder of Meredith Kercher, the defamation lawsuit brought to court by Patrick Lumumba and the Kercher family lawsuit (Mirabella 2012: 241). Evidence

which was considered crucial for the civil lawsuit, “even if that same evidence would not be considered probative or might be considered unduly prejudicial” (Mirabella 2012: 241), was not excluded from the jury in the criminal trial as would most likely have been the case in the common-law system. Whilst to an Italian jurist, a mixed jury is a guarantee that even if jurors know about the existence of evidence they will be prevented by professional judges during deliberations to make use of such evidence, for an American jurist exclusionary rules of evidence cannot be included in the trial. The reason for this, Damaska argues, is:

Evidence which has passed the test of logical relevancy and has been found suitable for rational inference may still fail to be admitted under the common law rules of evidence. Some of these rules, more rooted in experience than inspired by logic, exclude certain classes of logically relevant evidence, largely on the theory that its impact on the trier of facts may be stronger than its actual probative weight. (Damaska 1973: 5, in Mirabella 2012: 251)

The second element, the manner in which the Italian system deals with character evidence, also raised criticism from the public (Mirabella 2012: 242). The prosecution’s use of character evidence, based on data retrieved from social networks, was damaging for both Amanda Knox, often depicted as sexually unscrupulous “Foxy Knoxy,” and Raffaele Sollecito, described as a student with an erratic personality who spent most of his time under the influence of alcohol and drugs. The third main criticism was the way the Italian criminal code deals with jury sequestration. Particularly in the US, the public was outraged by the fact that jury members were allowed to

continue their daily routines, without sequestration, until they were summoned to court to deliberate (Mirabella 2012: 242).

It should also be noted, that the hybrid (i.e., part inquisitorial, part adversarial) nature of the Italian criminal law system is often misunderstood internationally. According to Grande (2000: 230), it consists in the adoption “not of the adversary model, but [...] rather the transplant of some of its features”. There are historical reasons for this, and, as Pizzi & Montagna (2004: 465) suggest, “Italy had no choice but to try to blend two great legal traditions: the civil law tradition and the common law tradition”. There are three fundamental reasons for this, according to the authors: to protect adversarial values, to reduce the importance of the issue of guilt, and to maintain some “features of its civil law heritage, such as the judicial role of the public prosecutor and the right of crime victims to participate in criminal trials” (2004: 465). This renders the reformed Italian criminal code unique among world legal systems. In practice, however, as Mirabella (2012: 230) highlights, the hybrid nature of the criminal procedure code in the Italian legal system has gone against the objective of the reformed code: for instance, “despite including adversarial processes into its criminal procedure code, Italy's inquisitorial foundations have continued to exert considerable influence over trial procedures”, which is one of the key objections made at international level in relation to this case.

2.4 Communication paradigms offline and online

There are other important factors which must be taken into consideration when discussing an international mediated legal case such as this. First of all, the actors involved (defendant(s) and victim) are from different nations, so we can assume that the journalists' and commenters' frames and scripts are shaped by intercultural factors. Furthermore, such frames are

influenced by hypotheses and interpretations speakers have about what another says: “Our interpretations and hypotheses are based on available contextual and cognitive information such as historical knowledge, schemata, and logic” (Hardaker 2013: 63). Moreover, commenting on newspaper websites is generally open to people from all backgrounds as long as they adhere to the community standards (see, in this case, <http://www.theguardian.com/community-standards>), so that the interaction that takes place on this type of forum is ostensibly of an intercultural kind. Due to the variability of online media communication and interaction, we would argue that media discourse encounters can lead to misunderstandings on a number of different levels. Boyd (2014a: 49) notes that although the new “communication paradigms” found in Computer-mediated Communications (CMC) have “reshaped the pragmatic features of language in online environments”, such exchanges still “imitate spoken conversation”. As highlighted by Herring (2010: 2), users “experience CMC in fundamentally similar ways to spoken conversation, despite CMC being produced and received by written means”. Finally, in line with Levinson (1988: 44), whose theories can be extended to CMC, online newspaper forum commenting can also demonstrate “chains of mutually-dependent acts, constructed by two or more agents each monitoring and building on the actions of the other”.

Our interpretations and assumptions, however, are also shaped by other factors that influence intercultural online interaction. Gudykunst’s intercultural communication, Anxiety Uncertainty Management (AUM) theory, which admittedly pre-dates CMC, argues that manifest differences exist in the way people manage encounters of this kind due to the build-up of anxiety and uncertainty when relating to “strangers”, to use the author’s term (Gudykunst 1995: 10-13). The theory defines

“stranger” as a person who is “physically present” in a given situation and yet “outside the situation”. As such, the person is perceived as not belonging to the same group or community (i.e., in-group, host community) (Gudykunst 1995: 10). Anxiety is the affective phenomenon that has to do with the way we react to interacting with “unknown others”. Uncertainty, on the other hand, is a cognitive phenomenon that affects the way people view communication with those which are considered ‘strangers’.

One particularity of intercultural communication encounters is the tension that is created among interactants from realizing that marked differences exist among them in terms of communicative approaches, cognitive perspectives and linguistic and cultural traditions. It involves the ability (or inability) to predict attitudes, beliefs, values and behaviours of unknown persons. If anxiety and uncertainty are not managed adequately, barriers that impede effective communication and reciprocity tend to be erected, affecting the effectiveness of this type of encounter. A strong link exists between lack of reciprocity and misunderstanding. In initial intercultural interactions, it results in a tendency to either retreat into known territory – so that communication with those we do not know is often avoided – in favour of interactions with those who share similar points of view. It also results in the manifestation of less accommodative reactions towards a stranger by holding negative attitudes towards the person and/or the encounter. Gudykunst (1998: 229) claims, “[w]hen anxiety is too high, strangers communicate on automatic pilot.” They interpret unknown others’ behaviours applying their own “cultural frames of reference” (1998: 229).

Some important points from AUM theory have been extended to the communication paradigm under discussion here, i.e. the online newspaper comment forum. First of all,

communication in this kind of forum fits the intercultural communication description: comments are open to people from many different cultural-linguistic traditions. Secondly, the very nature of the subject matter in this case – Italian civil vs. UK and US common law systems – although the object of many comparative law studies, is still subject to misunderstanding not only in CMC environments but also in academic and judicial ones. Hence, it provides an interesting and productive theoretical underpinning for new media discourse description and analysis. The assumption grounded on AUM theory is: intercultural communication barriers are lifted by mindful and accommodative behaviour; this kind of behaviour consists in purposefully reducing the levels of anxiety and uncertainty; and, anxiety and uncertainty can be replaced with positive conceptualizations of the social organization of others including human enterprise, education, family and the legal system (Gudykunst 1995, 1998).

To conclude this section, Neuliep (2012: 2) points out that anxiety and uncertainty are theoretically associated with communication apprehension and, importantly, ethnocentrism, i.e. “the technical name for this view of things in which one's own group is the centre of everything, and all others are scaled and rated with reference to it” (Sumner [1902: 13] in Neuliep [2012: 43]). Both of these variables can have repercussions in CMC encounters, and negative consequences for intercultural communication effectiveness; “to the extent that humans are ethnocentric, we tend to view other cultures (and micro-cultures) from our own cultural vantage point. In other words, our culture becomes the standard by which we evaluate other cultures – and the people from those cultures” (Neuliep *et al.* 2005: 45).

In this case, as noted, different cultures are involved in the interpretation of diverse legal norms and questions of what is

right or wrong. As mentioned previously, we can assume that the commenters on The Guardian Comment is Free web forum are from many different cultures and, therefore, their comments should be representative of myriad world-views. Nevertheless, we cannot likewise assume that the commenters examined have a full understanding of the legal case or the various legal norms and views in the different systems (Italian, English, American, etc.) discussed in the comments (and in the original news articles). As noted by Stubbs (1996: 9), misunderstandings may also relate to the simple fact, that “a major source of misinterpretation is when texts are read outside a specialist context”.² Predictions made by Shuter (2012: 221) point to both the importance of new media and intercultural communication as a new research area and to the challenges faced by practitioners and theoreticians working in it, in light of the fact that our understanding and assumptions about intercultural communication is far from complete. The author argues that “available research suggests that new media play a major role in the ebb and flow of intercultural encounters, conceivably augmenting twentieth century theories on communication across cultures” (Shuter 2012: 221).

As we have seen in §2.2, in the legal sector, language and law are closely intertwined. Understanding and interpretation are linked to knowledge of the law and the language used to express it (Engberg & Rasmussen 2010: 368). Constructivist approaches that view language as “an entity applied by individuals in their communicative and meaning creating (=semiotic) activities”, argue that in legal settings meaning

² Such misinterpretation can also occur in the original news report especially when the legal context is involved. Boyd (2013: 47) goes so far as to argue that “the use and recontextualization of certain legal lexical items may lead to an erroneous interpretation and retelling of the events and facts of foreign criminal procedure in the media”. We did not take this into consideration, however, in the present analysis.

making is reached by negotiating with other individuals in concrete situations such as those discussed here, “a process which leaves much more relevance to the opinions and the ideological stance of the people involved” (Engberg & Rasmussen 2010: 368). Our findings indicate that in intercultural mediated dialogic interactive encounters, constructing meaning is facilitated by managing anxiety and uncertainty, reducing the proclivity for ethnocentric behaviour and adopting an accommodative attitude towards cultural differences of unknown others.

3 Corpus and methodology

The corpus used in the study is drawn from the online Comment is Free section³ of The Guardian newspaper and is provided in Figure 1.

	N
Articles	13
Comments	3,943
Words	396,801

Figure 1. Guardian AK Comment Corpus.

Although only 13 articles were selected for the study, specifically because they were part of the Comment is Free section of the online newspaper, as we can see in Figure 1, they elicited a significant number of comments. Before continuing, however, we need to say a few words about the newspaper and accompanying website. Although The Guardian is well-known for a generally liberal and educated readership, it has remained one of the few major UK papers that has not created an internet

³ <http://www.guardian.co.uk/commentisfree/>

paywall, unlike other UK newspapers such as The Times, which is known for a more conservative stance. The relatively open access to the comments section in The Guardian as compared to other media outlets might help to explain the presence of both liberal and conservative opinions among commenters. However, according to the Comment is Free section of The Guardian's webpage, while they do indeed "publish a plurality of voices", the liberal bent of the newspaper remains evident: "our centre of gravity as a progressive, liberal, left-leaning newspaper is clear".⁴ This worldview is presumably maintained by the moderators who, however,

are not employed on the basis of any affiliation, and are required to enforce the community standards neutrally and consistently across the site, whatever their personal perspectives.

Although they sometimes need to make decisions which may be unpopular, their actions should not be interpreted as being revealing of pro- or anti- leanings apart from pro-[our community standards] and anti-[behaviour which goes against them].⁵

Finally, it should be noted that the online commenting function is only available for those articles that include "features which are discursive and likely to engender thoughtful, insightful, collaborative responses".⁶ Furthermore, comments and commenters are moderated according to community standards

⁴ <http://www.theguardian.com/help/2008/jun/03/1>

⁵ <http://www.theguardian.com/community-faqs>

⁶ <http://www.guardian.co.uk/community-faq>

to avoid instances of personal attacks, trolling, thread-jacking, and other such antagonistic online behaviour.

Before discussing the corpus data, we should also briefly address the use of comments as empirical data. While they represent a relatively new and valuable source of ‘user-generated metalinguistic data’ (Jones & Schieffelin 2009), comments have been shown in the literature to expand the potential for text production (Savoie 2009), to encourage the re-contextualization of texts, discourses and genres (Boyd 2014b) and to foster a “dialogic” platform (Jones & Schieffelin 2009). In their discussion of YouTube comments, Jones & Schieffelin (2009) stress that such data “demonstrate that respondents have strong opinions about language and texting practices, and freely question and evaluate linguistic choices in terms of competence, appropriateness, and ‘correctness’” (Jones & Schieffelin 2009: 1062). The comments under discussion here could be seen as examples of a dialogic platform, which is enhanced by the fact that they are not fully anonymous and, importantly, moderated. The commenters thus interact with the original text (the newspaper article) and with each other. Furthermore, commenting allows members of the lay public to express themselves on a wide range of topics including legal discourse. This dialogic platform provides unlimited opportunities to capture, from commenters’ descriptions and interpretations of events, actions and actors, instances of misunderstanding and misrepresentation of legal discourse. The platform also opens to further research in the field of intercultural mediatised communication commenting practices in legal and other specific language genres.

We also need to address the issue of corpus size, and namely how large a corpus should be for it to be considered valid. While there has been much debate about this in the literature (*cf.*, e.g., Sinclair 2004), we follow Baker (2006: 28)

who asserts that when dealing with a “linguistically restricted” genre – as in this case in which we are dealing with the relatively restricted (hybrid) genre of online newspaper forum comments – it may not be necessary to create a corpus consisting of millions of words. He further states that “when building a specialized corpus for the purpose of investigating a particular subject or set of subjects, we may want to be more selective in choosing our texts, meaning that the quality or content of the data takes equal or more precedence over issues of quantity” (2006: 29). Moreover, small, specialized corpora, according to Ahrens (2006: 377), may be useful in “testing specific linguistic hypotheses” helping researchers to draw out underlying conceptual patterns. Although limited to the comments of only one newspaper, we feel that the empirical data can still offer some preliminary findings about the nature of comments generated by a certain type of user interested in (international) law and/or this particular case. We hope that the discussion of these comments will lead to further research on the ways in which online users react to and interact with mediatised legal discourse.

In the current analysis we were specifically interested in determining and categorizing the most frequently used legal lexemes, potentially indicative of an accurate or inaccurate evaluation – or, possibly, understanding – of legal concepts and systems. The quantitative analysis of such data, as noted by Stubbs (1996: 121), can provide “direct empirical evidence about the connotation of words”. Furthermore, a focus on legal terms as a “specific semantic subset” or “preference” can provide an indication of the evaluative meanings that commenters make use of (Baker *et al.* 2008). Moreover, the qualitative analysis complements the quantitative one in light of what Baker *et al.* (2008: 296) have observed: “‘qualitative’ findings can be quantified, and ‘quantitative’ findings need to

be interpreted in the light of existing theories, and lead to their adaptation, or the formulation of new ones”. The added value of such a ‘corpus-assisted’ approach to empirical data is underlined, once again, by Baker *et al.* (2008: 296), as one that

[...] can help to identify some terms that can be significant in a corpus and see their use in context through concordance searches, thus pointing out the frequent co-occurrence of two or more words and revealing the collocation of a word with other words from a specific semantic subset (semantic preference) as well as the evaluative meaning that a speaker/writer gives to a word by using it with specific collocates (semantic prosody).

The corpus analysis and compilation will be discussed in more detail in the next section.

4 Discussion

4.1 Quantitative analysis

The first stage of our analysis was concerned with a quantitative lexical frequency account of The Guardian UK Comment Corpus to ascertain the most important legal concepts expressed in the comments (Baker 2006). A raw frequency word list was generated using the wordlist function in WordSmith Tools (Scott 2008). Subsequently, the wordlist was manually scanned for high-frequency legal lexical words. On the basis of this, we created a number of categories to sort the lexical items, i.e. terms related to the legal procedure, the crime, as well as more general terms. Secondly, we refined the search focusing on terms that had a tendency to collocate with legal terms and certain qualifiers we felt would be indicative of value-based judgments such as the words ‘Italian’, ‘case’,

‘American’ (see Fig. 2). Finally, the words were lemmatized to include grammatically-related forms. The 20 most frequent terms⁷ in these categories are listed in Fig. 2.

Lexeme	Frequency
evidence	1901
murder*	1495
case*	1490
Italian*	1485
guilt*	1015
police*	918
DNA*	870
crime*	834
court*	815
innocent*	811
prosecution*	758
trial*	670
convict*	662
American*	649
US	560
justice*	554
system*	541
appeal*	498
accused	442
judge*	435

Figure 2. Legal lexis frequency.

The actual legal lexis frequency word list, in fact, contains 107 lemmas accounting for a frequency of 5.37% in overall usage,

⁷ Lemmatized forms are indicated by an asterisk (*).

pointing to a relatively high concentration of legal lexis. Before moving to the next stage in our analysis, however, we looked at a number of lexical items in context using the concordance function in WordSmith Tools.

the attacks on the incompetent Italian judicial system, then
ns turned victory into defeat. Italian forensic science had
If you believe that the entire Italian judicial system is co
ardian over four years ago the Italian police's ludicrous "t
however, your little dig at the Italian police is pretty unca
ardian over four years ago the Italian police's ludicrous "t
arge dose of dishonesty, of an Italian prosecutor. I shall s
service to justice done by the Italian courts in this case.
east AK was brought before the Italian courts rather than an
of her life locked away in an Italian prison for a crime sh
n accused someone of being "an Italian cop" in a comment. Re
ublic alike (encouraged by the Italian prosecutor) against A
eally bad to make a joke about Italian cops. Each and every
y closely, and I do understand Italian. And I have read what
d. Rather than the far-fetched Italian theory of a sex game
usable theory than that of the Italian police. Recommend (8)
ay and she was returned to her Italian prison then her suppo

Figure 3. *Italian* concordance

Figure 3 demonstrates that most of the uses of Italian are part of clusters containing legal lexical items such as *judicial system*, *forensic science*, *police*, *prison*, etc. This allowed us to develop coding criteria for the identification of key words from both single words and phrase clusters. Subsequently, these were sorted according to the following categories: (a) procedure (evidence, police, DNA, court, prosecution, trial, appeal, judge); (b) crime (murder, squad, scene); (c) general legal (case, guilt, innocent, convict, justice, accused); (d)

nationality qualifier (Italian, American, US); and (e) collocating with legal (system, council, advice, team). The overwhelming majority of these terms concern legal procedure and general legal lexis. As far as the terms related to legal procedure are concerned, the similarity of many of the items demonstrate a strong tendency for what Sinclair (1996: 94) calls extended units of meaning or semantic preference for certain terms. Among the general legal lexical terms, on the other hand, we can find examples of lexical items that “convey connotations of emotion or violence” and, therefore, are subject to conflicting interpretations (Stubbs 1996: 110).

In the second stage of the quantitative analysis, the raw wordlists were compared against the British National reference corpus (BNC) to determine keyness, i.e. the measure of saliency (Baker 2006: 125) or the main focal terms (Stubbs 1996) of the two corpora. The keyword list was then sorted manually to include only legal terms and is provided in the list shown in Fig. 4.

Keyword
Italian
evidence
guilt
convict
murder
innocent
DNA
crime
case
trial
justice
police
interrogation
forensic
accused

prosecutor
kill
American
court
prosecution

Figure 4. Legal keywords.

The majority of the terms in Fig. 4 are the same as those contained in Fig. 2, which, we would argue, provides a strong indication that the comments address predominantly the legal process and the crime. In this way, the keyword analysis demonstrates that many of the most salient terms concern legal procedure and general (abstract) legal concepts, precisely those which would presumably be more open to misinterpretation among text commenters. In the next section we will examine the actual usage of two of the terms, *evidence* and *guilty*, to further test our hypothesis from a qualitative perspective.

4.2 Qualitative analysis

In order to determine specific uses of evaluative language, we examined some individual comments more closely. A small sample: the first 30 non-threaded (but chronological) items were considered. The limited size of the sample is justified by both the nature and scope of the study: since the main focus is commenting practices among users it was considered that this type of behaviour could better be observed, studied and classified through manual reading and sorting. Although such an approach is admittedly subjective, it was thought that a manual analysis would prove to be the best way to determine the use of evaluative lexis and uncover possible instances of misunderstanding and/or misrepresentation. We were also interested in finding seemingly unbiased, well-argued examples. Here we limit our discussion to seven examples that

are illustrative of the different strands of commenting.

Extracts (1) - (4) include two of the five most frequent legal terms among the legal keywords (Fig. 4), *evidence* (1) and (2) and *guilty* (3) and (4), typical of the characteristic disparaging nature of commentary. Below are two extracts containing the word *evidence*:

- (1) There is nothing left of the “case” against the 2 of them at all - why do you think the prosecution abdicated all discussion of the **evidence** during the appeal trial and devoted their entire time to character attacks on the defendants and ad hominem attacks on the independent experts who rubbished their so-called DNA **evidence**?

- (2) There is no truth in the story of the “faked” break-in or the “multiple assailants” claims by the prosecution – this was an invention by the investigators who needed to rationalise their over-hasty arrests of 3 innocent people [...] on 6 November. The simple truth, supported by all the actual **evidence**, is that the crime was committed by a lone burglar, Rudy Guede - and the police and prosecutor were too pig-headed to give up their crackpot theme of a 3-way attack committed by their original suspects.

Comment (1) is clearly critical of the prosecution (and the entire Italian judicial system). The graphological use of inverted commas is most likely aimed at mocking the prosecutors’ work by suggesting that there is indeed no case against Knox and Sollecito. The commenter also purports that the prosecution had avoided discussion of the (DNA) evidence and directed attention to attacking the defendants and experts who had discredited that very evidence. The commenter’s critical tone is highlighted through the use of the verbs *abdicated* and *rubbished*. While the former ostensibly legal

term, generally limited to constitutional law, appears to be used sarcastically to further criticize the prosecution possibly hinting at the monarchic – and therefore undemocratic – behaviour of the prosecution, the latter is used in relatively informal contexts in British English to indicate strong criticism. Comment (2), instead, focuses on the allegedly *hasty* attempts by investigators to justify their work, which resulted in the decision to arrest three people, whom the commenter claims are innocent. The commenter suggests that both the *break in* and the *multiple assailants* hypothesis should represent foul play, which had been set up to divert public attention. This comment also makes use of informal language – *pig-headed* and *crackpot* – to discredit the Italian prosecutorial procedure. In both comments, no mention is made as to whether allowing character evidence influence the jurors in court met or violated the rules of evidence standards prescribed by the Italian Criminal Procedure Code (CPC) or whether investigators involved in attempts to cover up procedural mistakes by acting contrary to standards and steps set out in the Italian CPC effectively did so, most likely indicating that the commenters here are applying their own cultural frames of reference for rules of evidence.

Below are two extracts that contain the lemma *guilty* (and its derivative *guilt*), as exemplifications to support the faulty practices claim:

- (3) The police told her [AK] she had to implicate someone to save her own skin. Knox was held for over 24 hours, questioned incessantly in a language she didn't fully understand, told over and over that she was **guilty** of the crime, slapped around, and denied access to an attorney.

- (4) Think whatever you like but there was not enough evidence to find her **guilty**, period. She would never have been found **guilty** in any civilised country, where justice is dispensed according to the principle which obliges the prosecution to prove **guilt** beyond reasonable doubt.

Comment (3) criticizes police behaviour when Knox was first arrested. It accuses them of using interrogation techniques that lasted too long and included linguistic and legal isolation as well as, importantly, violence (*slapped around*). While some of these accusations might be true, the commenter fails to mention that Knox did not have legal representation because she was still officially being treated as a witness, rather than a suspect, at her interrogation, and, in fact, the statements made by her during this time were later ruled inadmissible by the Court of Cassation⁸. Furthermore, Knox was allegedly offered legal representation, which she refused. The commenters makes certain assumptions based on only one side of the argument erroneously representing many of the events in the police investigation. Comment (4) mentions both *evidence* and *guilt* focusing on different understandings of how evidence is treated in court, which illustrates why the Italian approach to evidence might appear as being unfair to American and UK observers (Mirabella 2012: 248). The commenter also indirectly accuses the Italian system as being uncivilised, claiming that *Knox would never have been found guilty in any civilised country*. While to an Italian jurist, a mixed jury is a guarantee that even if jurors know about the existence of evidence they will be

⁸ http://themurderofmeredithkercher.com/Amanda_Knox%27s_Confession For an alternative version, that fails to mention many of the facts surrounding the three different interrogations, see <http://www.injusticeinperugia.org/TheInterrogation.html>

prevented by professional judges during deliberations to make use of such evidence, to an American jurist exclusionary rules of evidence cannot be included in the trial. The reason for this, as mentioned previously, is the possibility for this sort of evidence to influence the jury's decision even with the exclusion of probative weight.

Another example (5) which also contains the lemma *guilty*, builds on the word to launch an attack on the Italian justice system on many different levels:

- (5) I have no idea whether Amanda Knox is **guilty** or whether she made some unwise choices and is a victim of circumstances that spiraled out of control. I do know that the Italian so-called system of justice has completely failed to address the issue. From their amateurish mishandling of evidence, through their insistence on utilizing a prosecutor who was currently under investigation for unprofessional behaviour, and through the showing to the jury of a fictional film clip depicting Knox in the act of murder, the trial has been a joke. In this light, the invoking of witchcraft comes as no surprise within the apparent overall medieval context of their perceptions of justice.

Many of the points made by the comment is certainly influenced by the original article, which rather pointedly compares Carlo Pacelli's (civil defense lawyer for Lumumba, whom Knox falsely accused of murdering Kercher during her police investigation) examination of Amanda Knox to a trial from 1486 that involved witchcraft, and rightly labels the lawyer's examination as anachronistic and misogynistic, but appears to extend its criticism to the entire Italian justice. The commenter appears to extend such criticism even further by mentioning *the Italian so-called system of justice, the trial has*

been a joke, amateurish mishandling of evidence, invoking of witchcraft comes as no surprise and apparent overall medieval context of their perceptions of justice. While the commenter sarcastically admits to having incomplete knowledge of the suspect's situation, he/she appears assertive about how the legal system in which the suspect is kept in custody should operate, highlighting its apparent faultiness, amateurishness and lack of professionalism. Comments, however, are not always so emotionally charged and can demonstrate a more impartial position in regards to Italian and other justice systems. In (6) below, for example, the U.S. system is implicitly criticized by mentioning *death sentences*, which, in fact, have long been abolished in all EU countries including the UK. The commenter praises the Italian courts characterized as having a *more detailed appeals process*.

- (6) If there is any good in this scenario that is the Italian courts do no issue **death sentences** and have a more detailed appeals process which almost resemble a retrial.

The final comment, (7), we would argue, suggests a less frequent tendency in the corpus to show both unbiased and informed reasoning about the case and the facts surrounding it.

- (7) Knox's case highlights one of the many failings of the Italian court system? It never delivers door-slammng certainty, but it's not supposed to. Trials are for examining evidence and seeing if certain evidence should be held for consideration or not. The jury decided not to decide the case on conjecture and hypotheticals this time and they looked at the evidence and the lack of evidence – and based their verdict on that. I commend them. That's the best any trial can do in any country. Jurors have a responsibility to look at

the evidence, and the judge has the responsibility to allow evidence or not allow it. The judicial systems (democracies, really) in the free world are not designed to be door-slamming. I'd say they're more like sliding scales (or maybe just scales)?

While the comment clearly recontextualizes parts of Jones' (2011) critique of the Amanda Knox acquittal in 2011, which according to the journalist, "highlights one of the many failings of the Italian court system – it never delivers door-slamming certainty", it does offer a detailed account of the principles underlying jury trial procedure within a democratic judicial system. Of consequence here is the fact that the commenter constructively expands the concept of 'door-slamming' justice by questioning the imperative nature of the concept of truth in common and civil law legal systems along the lines of Mirabella (2012: 230). The commenter points out the different conceptualizations in both traditions in relation to the concept of decision making thus mindfully taking the discussion a step forward into an uncharted new dimension; a reminder to co-commenters that a decision is above all a question of ponderation of facts and law, rather than subscribing unquestioningly to water-tight absolute sentencing. In doing so, the commenter upholds the concept that lack of knowledge and understanding block "intercultural communication" as argued in Neuliep (2012: 12).

5 Conclusions

The high frequency of certain legal lexical items in the corpus-assisted analysis attests to a high interest in legal matters by commenters, with a particular interest in substantive and procedural criminal law and the nationalities of those involved. Since we were interested in demonstrating commenters'

evaluation and possible misrepresentation of important legal issues, the mere quantitative analysis of legal lexis usage and lexical categories was regarded insufficient. Moreover, categorizing the terms was not always clear-cut with many of the comments and categories remaining fuzzy. Collocates and concordances offer a better indicator of actual value-based language usage. A closer examination of collocates, concordances and specific examples demonstrates that the use of legal lexical items does not necessarily imply an understanding of a legal system. Thus, while the quantitative analysis helps to demonstrate legal lexical foci, the qualitative analysis helps to demonstrate the actual knowledge and level of understanding (or misunderstanding) of the arguments discussed in the mediatised forum.

Furthermore, by focusing on the use of certain lexical items and extended lexical units from legal English, a map of semantic preference and lexical foci begins to emerge. The detailed examination of certain terms, moreover, reveals misunderstandings of a legal system and value-laden judgments about it. It also reveals commenters' tendency to target "representatives" (actors & bodies) within the legal system (prosecutor, police force, forensic team), criticizing them in like manner in disregard of the roles they are called on to play within the system.

In the examples, the high-frequency terms *evidence* and *guilty* were both often 'misused'. This indicates that, first, the lay person makes affirmations of an intuitive or emotional nature in reaction to a verdict. These reactions resonate with those in other intercultural encounters described in Gudykunst (1995, 1998), Neuliep (2012) and Neuliep *et al.* that include 'strangers,' perceived as bearers of a different, unknown and as such 'defective' or 'faulty' cultural project (and legal system), for the mere fact of not fitting the known cultural project

mould. Secondly, there is often disregard of court arguments on sources of law (criminal code, judicial opinions, sentence reasoning). The fact that the actual sentencing published by the Court of Assizes of Perugia in 2010 in English, known as “the Massei Report” (2010), is written for a legal professional audience not for a non-professional one shows just how complex and incomprehensible the underlying legal principles, doctrine and procedures may remain to the lay public.

Differences between the Anglo-American common law legal systems, on the one hand, and the Italian hybrid criminal system on the other, tends to configure “vastly different understandings about how evidence should be controlled at trial and explains many of the aspects of the Knox case that seem unjust” (Mirabella 2012: 251) to observers on both sides of the Atlantic. This research shows misunderstanding and misrepresentation run high in debates over complex issues in media outlet commentary spaces. This may unleash far from satisfactory constructive and collaborative engagement. Spaces of this nature may be rendered far more satisfying for participants, particularly in high profile intercultural debates involving several legal systems if commenter contributions were grounded on solid factual, conceptual and procedural knowledge. This is particularly relevant in cases such as the one here in which commenters engage in often complex legal discourse involving the comparison of two major world legal traditions.

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ⁱ Note: **Section (§)1. Introduction** is written by Isabel A. Walbaum Robinson (IAWR) and Michael S. Boyd (MSB); **§2. The case and its theoretical foundations**, subsection (**§§**)**2.1. The Case** is written by IAWR and MSB; **§§2.2. Legal lexis and discourse** is written by MSB; **§§2.3. Italian criminal law** and **§§2.4. Communication paradigms offline and online** are written by IAWR; **§3. The corpus and methodology** is written by MSB; **§4. Discussion**, **§§4.1. Quantitative analysis** is written by MSB; **§§4.2. Qualitative analysis** is written by IAWR; **§§5. Conclusions** is written by IAWR and MSB.

Potential Speaker-Discriminating Power of Speaking Style: Application of Discourse Information Analysis to Forensic Speaker Recognition

Xin Guan

Abstract: Not only are there differences in the voices that are from different speakers of the same language, but also in the voices that are produced by the same speaker under different conditions or on different occasions. Such nature of human voice makes forensic speaker recognition possible, but difficult. Because in order to link a questioned voice in contact with criminal activity to a known suspect, the forensic speaker recognition expert has to correctly attribute the inevitable differences between two voice samples to either between-speaker differences or within-speaker differences. The parameters that are currently used in forensic speaker recognition are phonetic features, and their speaker-discriminating power has been tested in laboratories with lab-recorded audio materials. However, the forensically realistic conditions are far more complex than ideal laboratory conditions. Moreover, forensically realistic conditions have dramatic effects on forensic phonetic parameters. That is, there is a gap between FSR research and practice as far as the efficacy of forensic phonetic parameters is concerned. To bridge the gap, the study aims to explore non-phonetic features that have the potential to discriminate speakers and at the same time are resistant to within-speaker variability in voice and effects of forensically realistic conditions

Keywords: phonetic parameters; non-phonetic features; speaker-discriminating power; Discourse Information Analysis; individual speaking style

1 Introduction

When audio recordings of an unknown speaker are involved in a

legal case, usually an expert's opinion will be consulted on whether the audio recordings are produced by a known suspect. The expert's opinion may assist in investigation or be admitted as evidence, and the process for the expert to make a decision is forensic speaker recognition (FSR). FSR is the application of theories and methods in forensic phonetics that is an important branch of forensic linguistics (Du 2004: 61).

With the development of computer science, a variety of handy equipment and software to record and edit voice are becoming more and more popular. As a result, more and more audio recordings are getting involved in legal areas, and demands for FSR are increasing.

The fact that different speakers of the same language or dialect have different voices makes FSR possible. But it is also a fact that "the voice of the same speaker will always vary" (Rose 2002: 9) as a consequence of change in the speaker's age, health and emotional state, and communicative intent etc. (Alexander & McElveen 2007). This phenomenon is termed as *within-speaker variability* in voice.

Due to within-speaker variability in voice, what an FSR expert needs to do is to decide that the inevitable differences between voice samples to be compared are more likely to be between-speaker differences or within-speaker differences (Rose 2002: 9). However, in forensically realistic conditions, it is hardly possible to know such information as the questioned speaker's age, his health and mental state while he was speaking. Within-speaker variability in voice has become the main factor to restrict the development of FSR currently (Zhang 2009: 19).

Subject to the nature of human voice, there is a gap between FSR research and practice. The parameters that have been being explored in research and then used in practice are mainly phonetic features. Those phonetic FSR parameters are usually tested with audio materials intentionally recorded in ideal laboratory conditions so that the factors resulting in within-speaker variability are known and under control. But in practical casework total control and knowledge of these factors are impossible (Rose 2002: 18-20). Consequently, it becomes extremely difficult to attribute inevitable differences between voice samples in practical casework.

With a view to the increasing demands for FSR, it is necessary

and urgent to bridge the gap between FSR research and practice. Rose (2002: 92) suggests simulating real-word conditions in experiments by using as many as possible similar-sounding subjects' non-contemporaneous natural conversations when testing the efficacy of forensic phonetic parameters.

Following Rose's suggestion and considering the nature of human voice, this study makes an attempt on the adoption of natural conversations in the experiment in order to explore potential non-phonetic FSR parameters that are resistant to the within-speaker variability in voice and effects of forensically realistic conditions.

2 Relevant literature

2.1 Criteria for FSR parameters and requirements of forensic comparison sciences

On the basis of the criteria for an ideal acoustic FSR parameter set out by Nalon (1983: 11), Rose (2002: 51) sums up the following six criteria for an ideal FSR parameter that are applicable to any type of FSR parameters:

- 1) show high between-speaker variability and low within-speaker variability;
- 2) be resistant to attempted disguise or mimicry;
- 3) have a high frequency of occurrence in relevant materials;
- 4) be robust in transmission;
- 5) be relatively easy to extract and measure;
- 6) each parameter should be maximally independent of other parameters.

Rose (2002) points out that there is no ideal parameter that meets all six criteria and the most important criterion is a high-ratio of between-speaker to within-speaker variation.

Researchers agree (Nalon 1983: 101; Pruzansky & Mathews 1964; Rose 2002: 17; Wolf 1972) that the common way of selecting potentially useful FSR parameters is to inspect the ratio of between-speaker to within-speaker variation, that is, the *F*-ratio. *F*-ratio is usually a by-product of the Analysis of Variance. Thus, classical statistical discrimination analysis can be used to determine the discriminating power of FSR parameters (Rose 2002: 17).

Now it is in the midst of a *paradigm shift* in the evaluation and

presentation of evidence in the forensic comparison sciences (Morrison 2009). The shift requires that forensic evidence should be evaluated and presented in a logically correct manner. As a result, if FSR expects hope to achieve the degrees of reliability needed to serve the goals of justice, the likelihood-ratio framework that has been used as standard for DNA profiles since 1990s has to be adopted. Parameters used within the likelihood-ratio framework should be quantifiable (2009).

In short, effective FSR parameters in an FSR system should not only meet the six criteria summarized by Rose above, but also be quantifiable in order to meet the requirements of the ongoing paradigm shift in the forensic comparison sciences.

2.2 Types of currently-employed FSR parameters

Forensic phonetic parameters are the currently-employed FSR parameters in FSR practice which are complemented with such linguistic features as regional and social accents. Regional and social accents are usually used to profile a speaker according to his/her group identity, while it is phonetic features that are used to be FSR parameters to recognize a speaker.

Rose (2002: 32) categorizes forensic phonetic parameters into four main types: linguistic auditory-phonetic, non-linguistic auditory-phonetic, linguistic acoustic-phonetic and non-linguistic acoustic-phonetic. Generally, auditory-phonetic parameters are qualitative, and acoustic-phonetic features are quantifiable.

Linguistic auditory-phonetic parameters reflect the speaker-specific features with respect to the speaker's sound system and the way the sound system is realized. For example, how a consonant or vowel is realized. Non-linguistic auditory-phonetic parameters usually reflect such speaker-specific features as phonation type, and pitch range wide, which do not have to relate directly to individual speech sound as the linguistic auditory-phonetic features do. For example, whether a speaker's phonation type is whispery.

Linguistic acoustic-phonetic parameters reflect the acoustic features relating to speech sounds. For example, the acoustic features of a certain vowel. Non-linguistic acoustic-phonetic parameters usually reflect the features of the speaker's vocal apparatus, that is,

the features reflecting the shape and size of vocal tract.

In addition, Rose (2002: 39-41) classifies acoustic parameters into traditional and automatic. The linguistic and non-linguistic acoustic parameters introduced above are traditional acoustic parameters. Different from traditional parameters, automatic parameters do not relate to the linguistic auditory or articulatory properties of speech sounds, which are the mathematical abstraction of certain acoustic features of sound signal and used in automatic methods.

2.3 The nature of human voice and the problems of forensic phonetic parameters

Human voice is different from such biometric characteristics as DNA or fingerprints that are considered to be unique and in direct contact with the individual (Alexander & McElveen 2003; Morrison 2009; Nalon 1997).

But as a matter of fact, different speakers of the same language do differ in some aspects of their speech (Rose 2002: 325), which makes it possible to recognize a speaker from his voice. On the other hand, “the same speaker can differ in some aspects of their speech on different occasions, or under different conditions” (2002: 333). The existence of within-speaker variability means that there are always differences between two speech samples no matter whether or not they are produced by the same speaker (Coulthard & Johnson 2007: 148; Morrison 2009; Rose 2002: 10). It makes FSR difficult and controversial in practice (2002). Because due to the nature of human voice no one hundred percent match can be achieved between any two voice samples even if they are of the same origin.

Rose (2002: 270) emphasizes that to be able to accurately attribute the differences between voice samples, the internal composition of a voice must be understood. However, the internal composition of a voice is complex and so far it is difficult to understand all the complexities (2002: 270-95).

Nalon (1997: 749) defines a speaker’s voice as the “interaction of *constraints* imposed by the physical properties of the vocal tract, and *choices* which a speaker makes in achieving communicative goals through the resources provided by the various components of

his or her linguistic system”. Figure 1 shows the components of a voice. In the course of the interaction, the two mechanisms (linguistic and vocal) process two inputs (communicative intent and intrinsic indexical factors) and output a speaker’s voice.

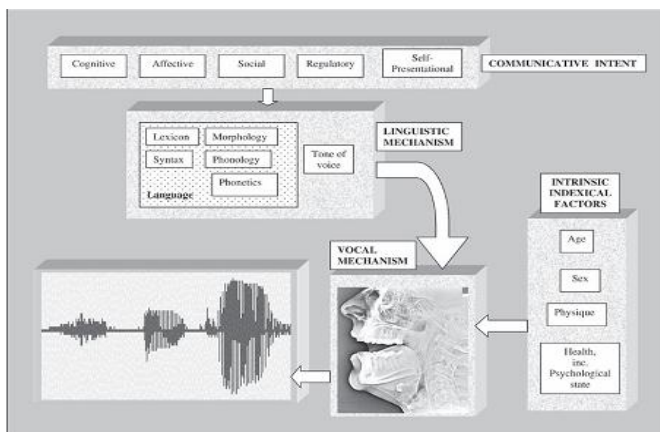


Figure 1. A voice model (from Rose 2002: 278)

Rose (2002: 295) points out that within-speaker variations are a function of a speaker’s communicative intent and the dimensions and condition of his individual vocal tract. Communicative intent decides what is conveyed and reflects the effects of contexts on the speaker. A speaker’s vocal tract imposes limits, instead of absolute values, to the ranges of phonetic features that his language makes use of.

That is, within-speaker variations result from the interaction between a speaker and the contexts in which he is speaking, and the complexities of the interaction have not been totally understood yet.

Therefore, lab-recorded audio materials have been being used as experimental materials in FSR research to test the efficacy of forensic phonetic parameters so that the sources of within-speaker variability can be under control and known to ensure the correct attribution of the differences between samples.

But, in practice not all sources of within-speaker variability are known or under control. For instance, there usually lacks the information about the questioned speaker’s intrinsic indexical factors, like age, sex, health and psychological state. On the other hand, even in ideal laboratory conditions, as for the known speaker, the total

control of his communicative intent is impossible. Figure 2 demonstrates the factors that can cause within-speaker variability in voice in real-world conditions and their interactive relationship.

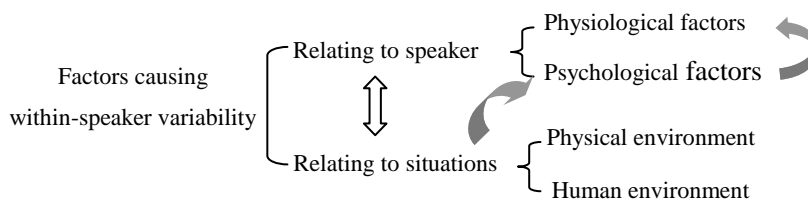


Figure 2. Factors Causing Within-Speaker Variability and Relationship among them (from Guan, 2014a)

Figure 2 shows that all factors relating to either speaker or situations may result in within-speaker variability in voice. It is also obvious that the total control of all factors relating to either speaker or situations in practice is hardly possible. Consequently, there is little guarantee that the lab-tested forensic phonetic parameters still show high between-speaker variability and low within-speaker variability, remain resistant to attempted disguise or mimicry, and keep robust in transmission under the effects of many unknown or uncontrolled factors when they are used to compare voice samples in practice. Moreover, Rose (2002: 20-30) summarizes that the forensically realistic conditions reduce the number of available parameters and distort the parameters.

In addition, as far as auditory-phonetic parameters are concerned, it is difficult to make them quantifiable. The evaluation of these parameters depends on the individual expert's knowledge of linguistics and phonetics, experience, his familiarity with the language/dialect as well as his listening ability (Hollien 1990: 205). As far as acoustic-phonetic parameters are concerned, they are quantifiable, but they are more sensitive to real-world conditions (Broeders 2001; Bijhold *et al.*, 2007; Jession 2010; Rose 2002: 36-41).

In summary, owing to the nature of human voice, neither qualitative auditory-phonetic parameters nor quantifiable

acoustic-phonetic parameters are immune to the effects of forensically realistic conditions. The effects of forensically realistic conditions lead to within-speaker variability in voice. As a result, the within-speaker variability reduces the validity and reliability of forensic phonetic parameters in practice in that their efficacy has been tested in the controlled lab conditions instead of in real-world conditions.

2.4 Available solutions and the inadequacy

So far, two solutions to the problems of forensic phonetic parameters have been suggested. One way is to try best to simulate real-world conditions when the efficacy of forensic phonetic parameters is tested. The other is to explore non-phonetic parameters and then test them with natural audio materials that occur in real-world conditions.

2.4.1 Simulating real-world conditions when testing phonetic parameters

The literature reviewed above illustrates that forensic phonetic parameters are affected by the factors relating to the speaker and the contexts in which he is speaking, and these factors are far more complex and far more difficult to control in forensically realistic conditions than in ideal lab conditions. Rose (2002 92-93) suggests that experiments to test the efficacy of forensic phonetic parameters should attempt to simulate real-world conditions as closely as possible through using non-contemporaneous natural conversation and as many as possible similar-sounding subjects.

Rose (2002) suggests Elliott's map task to elicit natural conversation. The map task (Elliott 2001) required the caller to guide his friend through a predetermined route that had been marked on the map. Because the caller and his friend used two similar but not identical maps, they had to negotiate the differences between their maps. In the course of their negotiation, the tokens to be examined were elicited. The caller, as the subject to be examined, was recorded in the laboratory.

Morrison, Rose, and Zhang (2012) suggest information exchange task over the telephone to elicit natural conversations. The task required one speaker to confirm with another speaker the

information of numbers and letters that is illegible in their faxes. Both of them were recorded with specific equipment at least in quiet rooms.

However, *simulating* is a kind of control. It is obvious that either map task or information exchange task had imposed control on the speakers' communicative intent as well as the contexts in which they were speaking. Figures 1 and 2 display that any degree of control will give the butterfly effect. In other words, the problems of forensic phonetic parameters cannot be solved by simulating real-world conditions.

2.4.2 Exploring non-phonetic parameters

Guan (2014a) suggests cross-validation method that validates comparisons of speech sound and individual speaking style. She thinks that speech as a whole should be taken as the object of investigation in FSR instead of speech sound only in that speech can be compared in terms of both phonetic parameters and non-phonetic parameters representing a speaker's individual speaking style, and their outcomes can validate each other.

2.4.2.1 The object of investigation in FSR – speech

Rose indicates that the linguistic mechanism refers primarily to the aspects of the structure of the speaker's language including phonetics, phonology, morphology, and syntax (see Figure 1). He overlooks the aspect of semantics when describing the components of a voice. However, it is a fact that voice carries information what a speaker intends to convey. Moreover, the primary function of language is for communication. That is, in the process of producing voice, what is finally output is not just only voice, but is speech that reflects the speaker's communicative intent. The speech is composed of the voice and information, see Figure 3, and the voice is kind of the container of information.

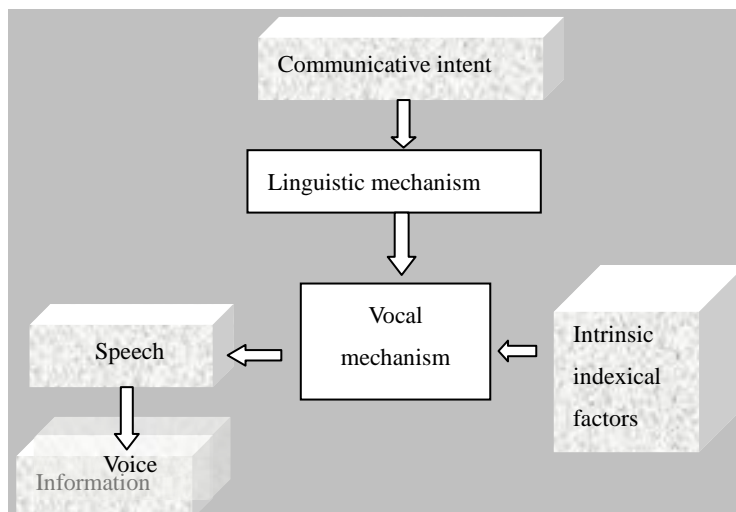


Figure 3. The Components of Human Voice

As far as speech is concerned, speaker-specific characteristics reflecting a speaker’s identity are embedded at all levels of speech (Alexander & McElveen 2007). Sapir (1927) treats speech as human behavior and defines five levels of speech. The five levels are the voice as such, the speech dynamics, the pronunciation, the vocabulary, and the individual style of connected utterance. So far, the application of speaker-specific features at the first four levels of speech to FSR has been documented thanks to their direct contact with voice. The features at the last highest level have not been dealt with due to their non-direct correlation with voice.

The highest level, the *individual style of connected utterance*, is defined as “an individual method of arranging words into groups and of working these up into larger units” (1927). In the light of the definition, this level appears to have nothing to do with voice, the container, but have something to do with information. Speaker-specific features at this level tend to be immune to within-speaker variability in voice. Natural conversations are proper experimental materials used to investigate information contained in voice.

Considering the distribution of speaker-specific features in speech, it is reasonable to define speech as the object of investigation in FSR. With speech to be the object of investigation, it is possible to

explore the non-phonetic parameters concerning the individual style of connected utterance through adopting natural conversations in experiments.

2.4.2.2 The nature of individual style of connected utterance and the approach to the analysis of speech

Individual style of connected utterance is in fact a speaker's individual speaking style in light of Sapir's definition. Sapir (1927) announced that it was theoretically possible to analyze individual speaking style but it would be a very complicated problem to disentangle social determinants from the individual ones.

Guan (2014a) argues that discourse analysis methods are appropriate to analyze speech to explore individual speaking style features based on the comments on discourse analysis methods by Johnstone (see Johnstone 1996: 24), Du (see Du 2008) and Qian (see Qian 2006).

Individual speaking style represents a speaker's individuality that he displays through his talk (Johnstone 1996: 7) and it appears "more or less consistent over time and situation" (1996: 5). Moreover, it characterizes a speaker just as gaits, facial expressions, and ways of dressing do (1996: 129), and none of social and psychological factors as well as changes in rhetorical situation "causes people to talk one way or another" (1996: 55). That is, speakers can seldom impose conscious control on individual speaking style, and it tends to remain consistent under different conditions and on different occasions. It means that it is relatively stable and is not affected by the forensically realistic conditions. Therefore, individual speaking style parameters are resistant to attempted disguise or mimicry and robust in transmission. To be specific, they meet the two criteria for ideal parameters in nature according to which the performance of phonetic parameters are reduced and doubted in practice.

Similarly, there is a layer in discourse that speakers can seldom impose conscious control whose structure is relatively stable compared with the flexible language forms (Du 2011). The layer is defined as *discourse information* by one new discourse analysis method, *Discourse Information Analysis* (DIA). Logically, it is hoped that the application of DIA to the analysis of speech can explore some

individual speaking style features that have the potential to be FSR parameters.

2.5 Discourse Information Analysis

DIA has grown out of the Tree Model of Discourse Information (cf. Du 2007). The Tree Model defines *discourse information* as proposition. Proposition is also the minimal and complete cognitive meaning unit. Each proposition is an *Information Unit*, which is the minimal and complete communicative meaning unit with a relatively independent structure.

According to the tree model, the surface layer of discourse is language, the underlying layer is cognition, and information lies in between. Discourse information is more stable compared with the surface layer of language, and is more accessible compared with the underlying layer of cognition. Analysis of discourse information structure makes investigation of discourse producer's cognitive structure more direct and more reliable than analysis of flexible language forms (Du 2007; Du 2011).

The information units in discourse are hierarchically structured like an inverted tree, see Figure 4.

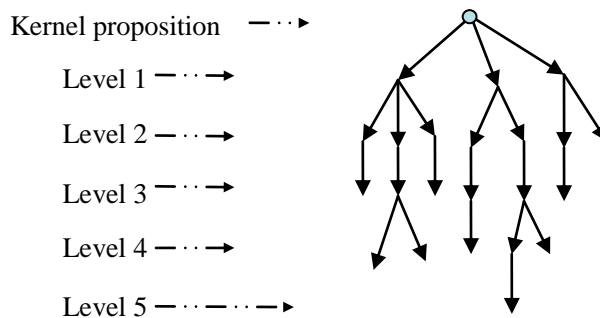


Figure 4. The Tree Structure of Discourse Information (from Du, 2013)

Each discourse has only one kernel proposition, which is developed by information units at different levels. Each information unit develops its superordinate information unit and their relationship is termed as *information knot* and represented by one of the 15 interrogative key words, see Table 1.

Table 1. Types of Information Knots

<i>Abbreviation</i>	<i>Interrogative Word</i>	<i>Abbreviation</i>	<i>Interrogative Word</i>
WT	What Thing	HW	How
WB	What Basis	WY	Why
WF	What Fact	WE	What Effect
WI	What Inference	WC	What Condition
WP	What Disposal	WA	What Attitude
WO	Who	WG	What Change
WN	When	WJ	What Judgment
WR	Where		

In addition, at the micro level, each information unit consists of information elements. There are three main types of information elements, *Process*, *Entity*, and *Condition*. Every type has its sub-types, see Table 2.

Table 2. Types of Information Elements

<i>Type</i>	<i>Abbreviation</i>	<i>Type</i>	<i>Abbreviation</i>	<i>Type</i>	<i>Abbreviation</i>
Process	P	Entity	e	Condition	c
State	S	Agent	a	Instrument	i
Quality	Q	Dative	d	Location	l
Relation	R	Patient	p	Source	s
Affect	A	Fractitive	f	Goal	g
Cause	C	Attribute	b	Commititive	c
Turn	T			Time	t
Behave	B			Affected	a
Negation	N			With	w
				Basis	b
				Manner	m
				Elaboration	e
				Situation	o

Further, in order to develop forensic application research, CLIPS (the Corpus for Legal Information Processing System) has been

constructed and put into use, in which such types of annotated data as texts, conversations, videos, images, and photographs are stored. In addition, a forensic linguistic laboratory has been established in which hardware and software systems to analyze speech signal are equipped with.

In short, DIA, along with CLIPS, offers strong support in the respects of theory, methodology, analysis tools, and qualified data to the analysis of natural conversations, which aims to discover non-phonetic parameters that represent the speaker's individual speaking style and are immune to within-speaker variability in voice.

To sum up, the literature reviewed above illustrates the problems of phonetic parameters and advantages of exploring non-phonetic parameters, and then suggests a perspective of exploring non-phonetic parameters. As the first step of exploring non-phonetic individual speaking style parameters, the following experiment is designed to demonstrate that individual speaking style features are possibly explored by the application of DIA to the analysis of speech and to test that they have the potential to discriminate speakers.

3 Experiment design and research procedures

3.1 Experiment design

As far as individual speaking style is concerned, it has been considered to be theoretically speaker-specific and analyzable. DIA is predicted to be an appropriate discourse analysis approach that can be used to analyze natural conversations to extract parameters reflecting individual speaking style. On this basis, the experiment intends to verify the assumption that individual speaking style is potentially speaker-specific.

To achieve the goal, two experiments were designed and conducted one after another in light of the nature of individual speaking style, see Figure 4.

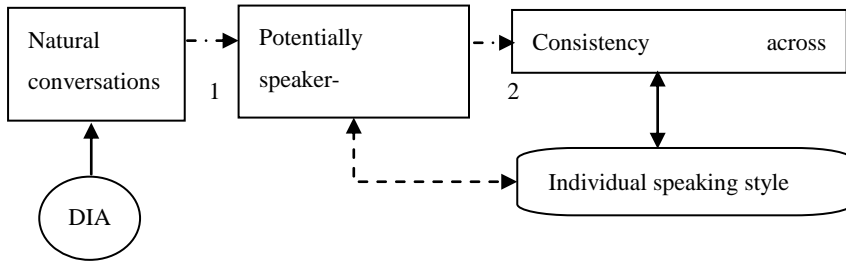


Figure 5. Experiment Flowchart

The first experiment intends to test the potential speaker-discriminating power of those features that are discovered through the application of DIA to the analysis of natural conversations. If the features were tested to be potentially speaker-specific, the second experiment would be activated and conducted that aims at examining the consistency of those discovered potentially speaker-specific features under different conditions and on different occasions.

According to the nature of individual speaking style, individual speaking style features should be speaker-specific, and at the same time stay consistent within a speaker regardless of the contexts. Thus, consistency is the proof that the discovered potentially speaker-specific features represent individual speaking style. In other words, only when consistency is available for the discovered potentially speaker-specific features, will the assumption be finally positively verified that individual speaking style is potentially speaker-specific. In both experiments, natural conversations that occurred and were recorded under real-world conditions were adopted as experimental materials.

3.2 Data

All natural conversations used in the experiments were sampled from CLIPS, where both audio file and annotated character-to-character transcribed text for every conversation are available.

The conversation data in CLIPS are face-to-face or telephone conversations occurring in real-world conditions. The conversations were recorded with mobile phone's build-in recording software

automatically, or with digital voice recorders. Before being input and stored in CLIPS, the speakers have affirmed that they were unaware of the recording process, which ensures the naturalness of the input conversations.

All speakers are the postgraduates from the School of English for International Business in Guangdong University of Foreign Studies and are at the age of 20-25 and speak good standard Chinese.

29 conversations from 13 speakers were randomly sampled as the experimental materials, whose basic information is displayed in Table 3.

The 29 conversations sampled from 13 speakers were numbered serially from 1 to 29, so were the 13 speakers from S1 to S13, as listed in the first two columns of Table 3. The information of each speaker's sex (*F* for female, *M* for male), age, and duration of each conversation are also listed in Table 3.

Table 3. Basic Information of Sampled Conversations

<i>No.</i>	<i>Speaker</i>	<i>Sex</i>	<i>Age</i>	<i>Duration</i> (<i>m:s</i>)	<i>Character</i> <i>number</i>	<i>Time</i>	<i>Medium</i>
1	S1	F	22	00:58	214	12/01/2013	F
2	S2	F	23	01:15	81	12/03/2013	F
3	S3	F	25	01:12	164	12/13/2013	F
4	S4	F	23	00:23	49	12/07/2013	F
5	S5	F	23	01:07	187	12/13/2013	F
6	S6	F	23	01:08	133	12/04/2013	T
7	S7	F	23	00:48	96	12/05/2013	F
8	S8	F	23	00:30	87	12/15/2013	F
9	S9	F	23	01:10	154	12/07/2013	F
10	S10	F	21	01:15	188	12/12/2013	F
11	S11	F	23	01:17	113	12/08/2013	F
12	S11			01:10	126	12/12/2013	F
13	S11			01:16	173	12/19/2013	F
14	S11			01:03	106	12/16/2013	F
15	S11			00:50	90	01/02/2014	T
16	S12	F	21	01:11	137	11/15/2013	F
17	S12			01:20	87	12/08/2013	T
18	S12			01:12	188	12/11/2013	F

19	S12			01:09	160	12/15/2013	F
20	S12			01:09	203	12/25/2013	F
21	S12			00:45	177	12/05/2013	T
22	S13	M	25	00:44	76	12/03/2013	F
23	S13			01:00	158	12/13/2013	F
24	S13			00:39	82	12/11/2013	F
25	S13			02:26	114	12/24/2013	F
26	S13			01:00	152	12/14/2013	T
27	S13			01:12	149	12/21/2013	T
28	S13			01:01	79	12/01/2013	T
29	S13			01:28	103	01/09/2014	T

Since the duration of each conversation in the table refers to the total duration when each conversation lasts between the interlocutors, the number of Chinese character produced by the sampled speaker is given in the sixth column to measure the length of the speech produced by the sampled speaker only. That explains why a longer conversation appears to consist of fewer Chinese characters as Conversation No.2 displays. The column of *Time* indicates the exact time at which each conversation was occurring. In the column of *Medium*, *F* indicates a face-to-face conversation, and *T*, a conversation on telephone.

3.3 Procedures and measures

3.3.1 Procedures

In consideration of the fact that each information unit has multiple values, and of the requirement that the FSR parameters must have a high frequency of occurrence in relevant materials (Rose, 2002: 51), to begin with, the values wanting to be investigated have to be determined.

Once the values to be investigated are determined, the sampled conversations are to be analyzed in terms of these values with DIA to extract potentially speaker-specific features. Next, Experiments 1 and 2 are to be conducted to test the potential of the extracted features to discriminate speakers and the extent to which they represent a speaker's individual speaking style.

3.3.2 Measures

Firstly, the distribution of 15 types of information knots was displayed in the form of the percentage of conversations containing each type in the sampled data set (the first row in Table 4) and of the occurrence percentage of each type in all conversations as a whole (the second row in Table 4).

Table 4. Distribution of 15 Types of Information Knots

	<i>WT</i>	<i>WB</i>	<i>WF</i>	<i>WI</i>	<i>WP</i>	<i>WO</i>	<i>WN</i>	<i>WR</i>	<i>HW</i>	<i>WY</i>	<i>WE</i>	<i>WC</i>	<i>WA</i>	<i>WG</i>	<i>WJ</i>
(%)	100	13.8	62.1	24.1	27.6	17.2	24.1	17.2	6.9	6.6	24.1	17.2	51.7	6.9	0
(%)	51.8	0.8	13.2	3.3	3.0	1.7	3.6	1.9	0.8	6.6	2.2	1.7	8.3	0.3	0

Table 4 illustrates that the information knot of *WT* presents in all conversations (100%), and meanwhile occurs well above other types of information knot (51.8%). Therefore, the information unit at the knot of *WT* will be observed so as to extract potentially speaker-specific features.

After careful observation, two features were selected as the potentially speaker-specific features. One feature concerns information unit, and another concerns information elements. The first feature is the duration of the information unit at the information knot of *WT* and is measured in millisecond, which is represented by *P1*. Different from other measures of speech tempo, here, information unit is set as the measure, which includes all kinds of pauses. *P1* was measured in the Forensic Linguistic Laboratory with CSL4500. The second feature is the ratio between the total number of information elements in each *WT* information unit and the total number of information elements in the conversation being observed, which is represented by *P2*. *P2* is expected to reflect a speaker's strategy to organize information elements in a conversation.

4 Experiments

4.1 Experiment 1

Experiment 1 intends to prove that the two features *P1* and *P2* are potentially speaker-specific. It means that they can distinguish speakers to some extent through working together or separately.

Usually, in FSR research speakers in dataset used to extract and

test discriminating ability of FSR parameters should be kind of homogeneous as far as certain basic information is concerned. For instance, the speakers are expected to be of the same sex, and similar in age, dialect region, and voice quality, etc. when acoustic parameters are to be compared (Morrison 2010). Hughes *et al.*, (2013) exemplified that more broadly, sociolinguistically homogeneous speakers were qualified, and they considered the DyVis speakers in their research to be sociolinguistically homogeneous who “are all young (aged 18-25), male speakers of Standard Southern British English from the University of Cambridge”.

A speaker’s individual speaking style is dependent on his linguistic ability and cognitive ability (Guan 2014b), thus, sociolinguistically homogeneous speakers will also be appropriate as a rule to sample speakers to test FSR parameters reflecting a speaker’s individual speaking style. As such, the conversations from S1 to S10 composing the dataset in Experiment 1 were produced by sociolinguistically homogeneous speakers, who are of similar age, of the same sex, and from the same school of the same university.

As reviewed, the common way of selecting potentially useful parameters is to inspect the ratio of between-speaker to within-speaker variation with the Analysis of Variance. Thus a one-way between-subject multivariate analysis of variance was conducted in SPSS19 where *P1* and *P2* were the dependent variables. If there is statistically significant difference among the 10 speakers in terms of the two features jointly or separately, the potential speaker-discriminating power of these two features will have been tested and the second experiment will be activated.

4.2 Experiment 2

Experiment 2 depends on the positive conclusion of Experiment 1, in which the potential of the extracted features to discriminate speakers has been tested, and it intends to prove that the two features *P1* and *P2* can reflect a speaker’s individual speaking style. It means that they would stay consistent among a speaker’s conversations across speech situations and time.

The conversations from S11, S12, and S13 were used as the experimental materials. Each speaker’s sampled conversations

occurred at different time and there is no overlap among the persons with whom the sampled speaker was talking. Given this, the conversations produced by each speaker can be considered as conversations across different speech situations and time. In addition, both female and male speakers were sampled to improve the reliability of the examination of individual speaking style.

One way to test the consistency of the extracted features among a speaker's different conversations is to test that statistically there is no significant difference among the sampled conversations from a speaker in terms of the two features separately. Thus three one-way between-subject multivariate analysis of variance were conducted in SPSS19 separately, where $P1$ and $P2$ were the dependent variables.

5 Results of experiments and discussion

5.1 Results of Experiment 1

For Experiment 1, $p = 0.000$ in Bartlett's Test of Sphericity, and $p > 0.05$ for $P1$ and $P2$ in Levene's Test of Equality of Error Variances, which shows that the data are qualified for a one-way between-subject multivariate analysis of variance. Box's $M = 42.422$, $p = 0.155$ in Box's M test, which is bigger than the significant level 0.05, thus Willk's Lambda was used to assess the multivariate effect, where Willk's Lambda = 0.456, and $p = 0.001$. The lower p value indicates that the 10 conversations were significantly different in terms of the two features jointly.

Furthermore, the univariate ANOVAs conducted in terms of either feature separately produced p values lower than the significant level 0.05, where p for $P1$ is equal to 0.038, and p for $P2$ is equal to 0.003. It demonstrates that either of the two features can distinguish speakers.

To sum up, the results of the one-way between-subject multivariate analysis of variance have showed that in Experiment 1 the 10 conversations from the 10 speakers can be predicted not to belong to one speaker in terms of the two features jointly or in terms of either of them separately. In other words, either of the extracted features with DIA has been tested to be statistically significant between speakers. Such results exemplified that DIA did work to extract discourse information features that can discriminate speakers

to some extent. As a consequence, Experiment 2 was activated and conducted to test whether these potentially speaker-specific features reflect a speaker's individual speaking style.

5.2 Results of Experiment 2

For Experiment 2, the Levene's Test of Equality of Error Variances and Bartlett's Test of Sphericity in three sub-experiments, see Table 5 and Table 6, indicate that the data are qualified for a one-way between-subject multivariate analysis of variance.

In the three sub-experiments, $p > 0.01$, the significant level, in Box's Test of Equality of Covariance Matrices, and thus Wilks' Lambda was used to assess the multivariate effect, where for S11, Wilks' Lambda = 0.545, $p = 0.134$; for S12, Wilks' Lambda = 0.700, $p = 0.196$; for S13, Wilks' Lambda = 0.690, $p = 0.591$. the p values larger than the significant level of 0.01 indicate that the conversations in each sub-experiment are predicted to be from one speaker in terms of the two features jointly.

Table 5. The Results of Levene's Test of Equality of Error Variances in Experiment 2

	<i>P1(S11)</i>	<i>P2(S11)</i>	<i>P1(S12)</i>	<i>P2(S12)</i>	<i>P1(S13)</i>	<i>P2(S13)</i>
F	.391	1.873	.937	.241	1.418	1.530
df1	4	4	5	5	7	7
df2	20	20	37	37	31	31
Sig.	.819	.155	.469	.942	.234	.194

Note: $\alpha = .01$

Table 6. The Results of Bartlett's Test of Sphericitya in Experiment 2

	<i>S11</i>	<i>S12</i>	<i>S13</i>
Likelihood Ratio	.000	.000	.000
Approx. Chi-Square	42.287	76.411	201.670
df	5	5	5
Sig.	.001	.000	.000

Note: $\alpha = .01$

The univariate ANOVAs conducted in terms of both features separately in every sub-experiment all gave the p values much larger

than the significant level of 0.01, see Table 7. The results indicate that both features show consistency within a speaker's conversations across speech situations and time.

Table 7. The Results of Univariate ANOVAs in Experiment 2

<i>Source</i>	<i>Dependent variable</i>	<i>Type III Sum of</i>		<i>Mean</i>		
		<i>Squares</i>	<i>df</i>	<i>Square</i>	<i>F</i>	<i>Sig.</i>
S11	P1	.261	4	.065	1.874	.155
	P2	.068	4	.017	.367	.829
S12	P1	.250	5	.050	1.614	.181
	P2	.176	5	.035	1.167	.344
S13	P1	.495	7	.071	.162	.991
	P2	.005	7	.001	1.069	.406

Note: $\alpha = .01$

5.3 Discussion

This experimental study was conducted to verify the potential speaker-discriminating power of individual speaking style. DIA is considered to be an appropriate approach to analyze natural conversations and find out non-phonetic features at the level of discourse information that reflect individual speaking style.

Different from the prior experiments in FSR research, the experimental materials used in this study are natural conversations instead of lab-recorded audio materials. All these natural conversations occurred in real-world conditions and were being recorded with nothing controlled.

Firstly, based upon the distribution of 15 types of information knots in all sampled conversations, the information unit at the information knot of *WT* has been determined to be the object of investigation. That ensures that the two extracted features meet one of the six criteria for ideal FSR parameters that they should have a high frequency of occurrence in relevant materials.

One of the explored features is the duration of *WT* information unit. It can be easily measured with computerized speech lab, or with voice analysis software like Praat. Another is the ratio between the total number of information elements in each *WT* information unit and the total number of information elements in the conversation

being observed. It can be extracted through simply counting the number of information elements in each WT information unit and a conversation and then computing the ratio. Therefore, the two explored features meet one more of the six criteria for ideal FSR parameters that they should be relatively easy to extract and measure.

Then, in Experiment 1, the two explored features have been tested to have enough higher F -ratio to discriminate the sampled speakers both jointly and separately. In other words, the two features tend to meet the most important criterion for ideal FSR parameters that they should show high between-speaker variability and low within-speaker variability.

In Experiment 2, the two explored features have been tested to stay consistent within 3 different speakers respectively. Because all involved conversations from each speaker occurred in different speech situations and at different time, the tested within-speaker consistency illustrates that the two features tend to meet another two criteria for ideal FSR parameters that they should be resistant to attempted disguise or mimicry and be robust in transmission.

In addition, $P1$ and $P2$ has been tested in SPSS19 to be uncorrelated with $p = .524$. That is to say, they meet the sixth criterion for ideal FSR parameters that each parameter should be maximally independent of other parameters.

In summary, the results of the experiments demonstrate that the two explored quantitative features tend to meet all six criteria for ideal FSR parameters. It provides evidence for the individual speaking style as well as their potential speaker-discriminating power. Put another way, supposing the consistency was accidental due to small datasets, and then the extracted speaker-specific features might reflect the common sense *style* in sociolinguistics at the level of language instead of *the individual speaking style* at the underlying level. However, “there are no single style speaker” (Labov, 1984) in that style reflects the interaction between a speaker and contexts (Eskénazi, 1993). Then as a consequence, these features would not have demonstrated consistency between any two of the conversations occurring under different conditions or on different occasions. As such, consistency across more than five speech situations and time in three cases from both female and male speakers is convincing to

some extent.

Most importantly, the experimental materials in this study are natural conversations. It means that they could be put into practice directly if the explored features were further tested to represent individual speaking style to a great extent by large datasets of natural conversations.

6 Conclusion

The experiments were designed in order to test that individual speaking style has potential speaker-discriminating power as predicted and is potentially qualified non-phonetic FSR parameters.

The results of Experiment 1 demonstrate that the two features concerning discourse information and extracted with DIA did show high between-speaker variability and low within-speaker variability. On the basis of Experiment 1, Experiment 2 further verified that the two features extracted in Experiment 1 did stay consistent among the same speaker's conversations across different speech situations and time. It proves that they represent a speaker's individual speaking style to some extent.

Moreover, the two features are quantitative, which makes it easier to evaluate them with likelihood-ratio approach as the new paradigm shift requires. Further, the potential speaker-discriminating power of the two quantitative features was tested with natural conversations that occurred in real-world conditions, and they remained consistent under different conditions and on different occasions. It indicates that individual speaking style features tend to be immune to within-speaker variability and the gap between FSR research and practice is to be bridged if the forensic significance of individual speaking style features can be further verified and evaluated.

To sum up, the results of Experiment 1 and Experiment 2 together have provided support to the following predictions. First of all, individual speaking style is potentially speaker-specific. Next, individual speaking style parameters tend to be resistant to within-speaker variability in voice and the effects of forensically realistic conditions and meet all criteria for ideal FSR parameters. More importantly, natural conversations have been introduced into

FSR research through this study, which plays a key role in bridging the gap between FSR research and practice.

Certainly, the potential speaker-discriminating power of the two features, as well as the extent to which they represent a speaker's individual speaking style, expects to be tested and evaluated with large datasets. Furthermore, it is hoped that more non-phonetic features are to be explored and tested inspired by this experimental study.

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Bionote

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Media Representation of the Islamic Law: A Case Study of Ashtiani's Stoning

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Abstract: Drawing on principles of Critical Discourse Analysis (CDA) and Systemic Functional Linguistics (SFL) the proposed study tried to reveal media portrayal of the Islamic law in general and stoning in particular. In order to achieve this purpose, quantitative and qualitative analysis was conducted on the coverage of the Ashtiani's case in eight English-Language European newspapers to examine the discursive strategies of ENGAGEMENT (Martin & White 2005), in turn, reveal the news writers' positions regarding stoning as an Islamic practice. The current study has demonstrated that far from merely reporting events, news writers have univocally shown that one of their main jobs is to present reality (news events) based on their perspective even though they may challenge some of the readers' through employing contracting and expanding heteroglossic strategies. At the same time, (in)direct quotations have been employed extensively to delegate, or at least share, the responsibility of these propositions.

Keywords: Islamic law; stoning; media discourse; appraisal framework; engagement; subjectivity

1 Introduction

The most pivotal aspiration of critical discourse analysis (henceforth, CDA) as a type of discourse analytical research is to observe and scrutinize the ways in which hegemony, inequality, control, social power abuse, asymmetrical power relations, and dominance are instantiated, practiced, reproduced, and resisted in social and political context through discourse, i.e., people's text and talk (Fowler, Hodge, Kress & Trew 1979; Kress 1985; Wodak 1989; Kress 1990; Hodge & Kress 1993; Van Leeuwen 1993; Fairclough 1995a; Fairclough 1995b; Haidar & Rodriguez 1995; Fairclough & Wodak 1997; Fairclough 2001; Meyer 2001; Van Dijk, 2001a; van Dijk, 2001b; Wodak 2001). Therefore who engages in CDA, by and large, is

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interested in not only understanding but also *challenging* the ways of revelation and manifestation of dominant and ruling ideologies in language or in non-linguistic phenomena such as image (McKinlay & McVittie 2008: 12).

Such a theoretical background encourages CDA investigators to align themselves with the theory of “ruling class and ruling ideas” (Marx & Engels 1965), which assert that ruling ideas in every epoch are under the ownership of ruling class. Ruling class is the class which has the resources of material production at its disposal and as a result rules the resources of mental production (Marx & Engels 2006: 9). To sum up, ruling class is the class which is “the controlling *material* force of society is at the same time its controlling *intellectual* force” (2006: 9). In the same vein, Gramsci (2006) reminds us of the importance of *material organization*, which aimed at sustaining, defending, and improving the theoretical or ideological “front”, in the study of how practically the ideological framework of a ruling class is systematized in a discourse (2006: 16). One of the dynamic parts of these ideological structuring manufactures is *media*. The role of media in representing realities or as Macdonald (2003) a little gently suggests, in *helping to construct versions of reality* is cogent and undeniable (14). Bridges and Brunt (1981) emphasize,

What [the media] “produce” is, precisely representations of the social world, images, descriptions, explanations and frames for understanding how the world is and why it works as it is said and shown to work. And, amongst other kinds of ideological labour, the media construct for us a definition of what *race* is, what meaning the imagery of race carries, and what “the problem of race” is understood to be. (35)

With an eye on the productivity of media in the construction of what “Islam” or “Islamic legislation” or “femininity” might mean, this paper attempts to make use of CDA along with the appraisal theory (Martin & White 2005) to find the strategies of ENGAGEMENT through which media exercise their subjectivity. Among the different subsystems of the APPRAISAL framework, ENGAGEMENT best describes the effective negotiation of the writer’s interaction to create a (contrastive) stance in argumentation. As Fairclough (1992a) the notion of intertextuality offers “a perspective of both reading and writing texts as a way of looking at a text’s interactions with prior texts, writers, readers, and conventions” (Wang 2006: 73). According to Bakhtin (1981), all utterances exist “against a backdrop of other concrete utterances on the same theme, a background made up of contradictory opinions, points of view and value judgments...pregnant with responses and objections” (281). Fairclough (1992a) further explains, “[a]ll utterances ... are populated, and indeed constituted by snatches of other’s utterances, more

or less explicit or complete” (102). Hence, this study focuses primarily on intertextuality as it examines the instances in which news writers appropriate other texts and comments to make them their own and further provide their ideas in their own texts to reveal their ideology implicitly. The present study has aimed at answering In the same vein, ENGAGEMENT, which is one subsystem of the APPRAISAL framework developed by Martin and White (2005), “construes texts as being informed by other texts (actual and potential), and sees audiences entering into complex dialogues with these texts rather than passively receiving their meaning” (Tan 2008: 3). ENGAGEMENT is also concerned with “the ways in which values are sourced and readers aligned” (Martin & Rose 2003: 22).

Richardson (2007) admits that, amongst the different approaches to CDA, he is satisfied with Fairclough’s approach (37). According to Fairclough’s model of CDA, texts cannot be understood or viewed in isolation; they should be examined in relation to the other texts (Richardson 2007: 100). In short, *intertextuality* is central to his model (100).

With an eye on the productivity of media in the construction of what “Islam”, “Islamic legislation”, and “femininity” might mean, this paper attempts to make use of CDA along with the APPRAISAL theory (Martin & White 2005) to examine the strategies of ENGAGEMENT through which media exercise their subjectivity in discussing one of the most debated issues in the Western media, namely stoning. It aims at addressing the following questions: (1) what are the most frequent positions news writers hold? (2) how can monoglossy/hereroglossy of value positions, being advanced in news discourse, be traced back through ENGAGEMENT system? and (3) how do news writers evaluate stoning as an Islamic practice through engaging into direct/ indirect quotations?

The current paper is divided into seven sections. After this introductory part, the study gives a religious background on stoning in Islam followed by a brief overview of obstreperous case of S. M. Ashtiani. In addition, a synopsis account of the ENGAGEMENT system and monoglissity vs. heteroglisity of value positions, covering three main issues of evaluative language, i.e., denying dialogic diversity, contracting dialogic diversity, and expanding dialogic diversity, is presented. This is followed by the data collection and a detailed analysis of the corpus under investigation. Last but not least, the discussion and conclusion parts are presented in an attempt to give comprehensive answers to the research questions based on the findings of selected data analysis, and suggestions for further studies.

2 Background of the Study

2.1 Stoning in Islam

Stoning (Arabic, *rajm*) is a form of punishment in which the convicted criminal is penalized by having stones thrown at him/her, generally by a crowd. To understand stoning as a punishment in Islamic criminal law and its rationalization, one should know that in Islam the *Holy Qur'an*, is the principal source of every form of Islamic thought. It is also the Qur'an that gives religious validity and authority to every other religious thought. Yet, in the part of the Islamic sciences, which comprises the injunctions and laws of *Shari'ah*, the Qur'an contains only the general principles. Thus, clarification and elaboration of their details, for instance the manner of accomplishing the daily prayers, fasting, exchanging merchandise, and the like can be fully explained only by referring to the traditions of the Holy Prophet, i.e., *Sunnah* (Allamah Tabataba'i 2006: 138-139).

Rape, incest, and adultery under Islamic criminal law all are subjected to *ha'ad*² punishment (Zarrokh 2008: 3); nevertheless, the case of stoning is exclusively related to adultery or *zina*. As Norman (2005) puts it, while the Qur'an does not address the issue of rape directly, it explicitly denounces *zina* as one of the most serious sins in Islam in at least twenty-seven verses (1). *Zina*, which is applied to both adultery and fornication, is punishable when the adulterer or the adulteress is of age, sane, in control of his or her action and cognizant of the illicit nature of his or her act (Zarrokh 2008: 3). *Zina* is punishable by 100 lashes (Qur'an 24:2), for the unmarried person, men and women alike. On the other hand, the married persons, there are *hadithes*³ which illustrates the Prophet differentiated between *consensual* and *nonconsensual* intercourse, i.e., person who is found guilty of adultery and fornication, though the term *zinaw* as applied to both (Norman 2005: 2) and this fact reveals and underlines should be executed by stoning based on the Islam's commitment to justice and to women's dignity; yet more important apparent proof of this claim is its *Sunnah* (Shafaat 2003: 1). The requirements for evidence of *zina*, i.e., aside from confession, are four affirming close-eyewitnesses males who all satisfy the requirements of *tazkiyah al-shuhood* (credibility of witnesses) were necessary to prove that sexual misconduct occurred (Qur'an 24: 4), in clear terms, i.e., they all). More specifically, these witnesses should see the actual process of penetration which is really rare to happen (Norman 2005: 5). If any of the witnesses testifies that he sees them naked, or he describes certain positions or movements, it is not sufficient to prove that *zina* took place (Abdullah 2010).

² *Ha'ad* crimes (prescribed punishment) are crimes with fixed punishment in the Qur'an and *Sunnah* (Alasti 2007: 6).

³ *Hadith* (singular form of plural Arabic *a'hadith*) is collection of writings that document the sayings and actions of the Holy Prophet

Islamicists believe such requirements exhibit the outlook of Islam to Islamic society in the way that (a) while it forbids all sexual relations outside of marriage; Qur'an does not call for legal intervention unless the illegal act becomes one of public obscenity (Azam 1997; Quraishi 1997; Alwazir 2004) and (b) as Norman (2005: 2) puts it, they strongly protect women against slander: "those who accuse chaste women, and then are unable to produce four witnesses, flog them with eighty stripes..." (Qur'an 24: 4). It is noteworthy to mention that "singling out women for punishment based only on accusations or assumptions has no basis in Islam" (Alwazir 2004: 7). The Qur'an obviously indicates that slander (Arabic *qazf*), is also a serious sin in Islam and guarantees that a woman's reputation cannot be wrongly slandered, by preventing false accusations, and by pointing out that "a woman's word to swear her innocence is sufficient to both preserve her reputation and result in punishment of her accusers" (Alwazir 2004: 6).

2.2 The Case of S. M. Ashtiani

Sakineh Mohammadi Ashtiani (born 1967) is an Iranian woman who is convicted for committing murder, manslaughter and adultery, based on a report by Sharifi, head of East Azerbaijan Province's judiciary. She has been under sentence of stoning as a result of her self-confessed and proven adultery under the Iranian government's interpretation of Islamic law since 2007. International Committee against Stoning and Mission Free Iran on 26th of June, 2010 published a letter which was written by Ashtiani's two children, Farideh and Sajad, asking the entire the world to save their mother. The letter brought a more prevalent consideration to her case in 2010 as a result of grassroots campaigning through social networking sites that led to the letters being passed along to mainstream mass media. On September 8, 2010, Mehmanparast, a spokesman for the Iranian foreign ministry announced that the stoning sentence of Ashtiani is stayed; although she is due to be hanged for murdering her husband.

3 Theoretical Background

As noted in the introduction, this study locates itself within the field of CDA, which is a theory of discourse as well as a method for analyzing it (Chouliaraki & Fairclough 1999: 16). Within the framework of CDA, the current study investigates how media represent the Islamic law in general and stoning in particular by shedding light on the resources of intersubjective stance (or ENGAGEMENT) in the selected articles that have discussed the issue of S. M. Ashtiani who attracted media attention and caused an international outcry. Needless to say, many politicians and human rights activists have

declared statements and commented on the punishment of stoning. It goes without saying that the media have reported their statements extensively.

ENGAGEMENT system is subdivided into (as Martin (2004) put it, “[a]ppraisal is regionalized as three interacting domains – ATTITUDE, ENGAGEMENT, and GRADUATION” (324). This study focuses primarily on intertextuality as it examines the instances in which news writers appropriate other texts and comments to make them their own and further provide their ideas in their own texts to reveal their ideology implicitly. ENGAGEMENT system is subdivided into (a) the *undialogizedmonogloss*, “which ignores that diversity” (6) and (b) the *dialogic heterogloss*, “which acknowledges in some way the diversity associated with all utterances (Miller 2004: 5) and (b) the *undialogizedmonogloss*, “which ignores that diversity” (6). The current paper examines such perspective of the writers of the articles under the investigation to probe the positioning of the writers towards stoning as an Islamic practice within the heterogeneity of politicians’ positions and worldviews. It is well known that “[w]riters negotiate the arguability of their utterances in a text by presenting the proposition as either extra-vocalized information (information which has been attributed to another) or as bare assertion (information which has not been attributed and which must therefore belong to the writer) (Jovanovic-Krstic 2008: 164). According to Martin and White (2005), heteroglossic resources are divided into categories based on whether they are “dialogically denying”, “dialogically contractive”, or “dialogically expansive” in their intersubjective functionality (102). Such distinctions shows the degree to which an utterance ignores other perspectives (dialogically denying), challenges and limits prior perspectives (dialogically contractive), or allows other dialogically alternative positions and voices (dialogically expansion) (p.102). The following summarizes the key ENGAGEMENT resources grouping them together under the previous headings highlighting the pivotal terms of dialogistic positioning which are related to the different sub-choices within ENGAGEMENTdepicted in the data.

- **Denying Dialogic Diversity (monoglossic):**

- **Bare Assertion:** “An utterance which does not employany value of *engagement*. Such an utterance ignoresthe dialogic potential in an utterance” (Mei 2006: 351). Monoglossic bare assertion or (heteroglossic disengagement) refers to evaluations which are introduced into discourse via bare assertions. Such propositions are declared absolutely without acknowledging any other alternative positions in terms of these particular evaluations and without recognizing any continuing debate within which such propositions

operate (White 2003a: 263). According to Bakhtin (1935), such resources are “monoglossic” or “undialogized” (427).

- **Contracting Dialogistic Diversity:** dialogistically contractive sources function to exclude any alternatives and align the putative reader “into the value position which is being advanced ... by the text” (Martin & White, 2005: 127).
- **Disclaim:** is the textual resources that invoke that prior statements are “rejected, replaced, or dismissed irrelevant or some way communicatively inactive” (White 2003b website). It is divided into denial and counter-expectation
 - ◆ **Denial** or negation, from a dialogistic perspective, is a resource to introduce an alternative (positive) position into the dialog by acknowledging it in order to reject it (Martin & White, 2005, p.118), for example, *The military action won't damage the relationship between our country and our allies*. Martin and White (2005) explain that denial is one of the mechanisms of positioning in terms of alignment and putative readers (118). Denying which indicates disalignment with a prior view may align “the reader into a position of opposition to [this prior view]” (Martin & White, 2005, p.119). On the other hand, denial might be against the putative readers, especially against beliefs or ideas the writer thinks his readers are subject to (119).
 - ◆ **Counter-Expectation** is the second subtype of disclaim and it presents the current proposition which encounters a prior proposition, for example, *Surprisingly, this military action has not damaged the relationship between our country and our allies*. This mechanism is as dialogistic as denial in that it invokes an alternative (contrary) position. Counter-expectations are revealed through conjunctions, connectives, and adjuncts/adverbials such as *although, but, even though, however, only, surprisingly*, etc. Martin and White (2005) indicate that counters are like denials “in that they project on the [reader’s] particular beliefs or expectations” (121).
- **Proclaim** refers to the textual resources that “limit the scope of dialogistic alternatives in the ongoing colloquy (Martin & White

2005: 121). Proclaim is divided into concur, pronounce, and endorse.

- ◆ **Concur** (or expect) refers to the resources which indicate that the writer is in an agreement with a prior projected dialogic position of the putative reader. Such a relationship is revealed through locutions, e.g. *of course, naturally, admittedly, not surprisingly, etc.* (Martin & Whit 2005: 122), for example, *Of course the military action will damage the relationship between our country and our allies.* In addition, such concurrence might be realized through rhetorical questions by which the writer assumes no answer is needed because it is obvious (123). Such formulations show “the shared value or belief as [being universal]” (123-124).
- ◆ **Pronouncement** refers to resources that “involve authorial emphases or explicit authorial interventions or interpolations” (127). For example, *I contend, the facts of the matter, undeniably, you must agree that, etc.* These textual resources constitute “an overt intervention into the text by the authorial voice – an interpolation of the authorial presence so as to assert or insist upon the value or warrantability of the proposition” (127-128). Although “such formulations acknowledge the heteroglossic diversity [,] . . . they set the authorial voice against that diversity, presenting that voice as challenging or heading off a particular dialogic alternative” (130). In such formulations, the writer may confront the putative reader or a third party on the behalf of the reader.
- ◆ **Endorsement** is concerned with the “formulations by which propositions sourced to external sources are construed by the authorial voice as correct, valid, undeniable or otherwise maximally warrantable” (126), for example, *show, demonstrate, prove, find, point out, etc.* Such resources show how “the authorial voice enters into a dialogic relationship of alignment with the [the utterances of a prior] speaker” (126). In these formulations, “the internal [authorial] voice takes over responsibility for the proposition, or at least shares responsibility for it with the cited source”.

- **Expanding Dialogistic Diversity:** dialogistically expansive sources function to include alternative voices and positions. It is divided into “entertain” and “attribute”.
- **Entertain** is “those wording by which the authorial voice indicates that its position is but one of a number of possible positions and thereby ... makes dialogic space for the possibilities. [That is,] the authorial voice *entertains* those dialogic alternatives” (Martin & Whit 2005: 104). It is divided into “evidence” and “likelihood”. The formulations of this sub-category allow some space for “alternative voices and value positions” (108). Dialogistically, the locutions of both *evidence* and *likelihood* “construe a heteroglossic backdrop for the text by overtly grounding the proposition in the contingent, individual subjectivity of the [writer] and thereby recognizing that” this proposition is a possible one among alternative propositions which are available in the current context (105).
 - ◆ **Evidence** is a sub-category of entertain and “includes evidence or appearance-based postulations” (105) through the use of some formulations, for instance, *it seems that, there is evidence which indicates that, etc.*, and specific types of rhetorical questions which do not assume a particular answer but are used to imply that there is “some proposition that holds” (105).
 - ◆ **Likelihood** is one type of the assessments a writer may make via modal auxiliaries (might, could, should, etc.), modal adjuncts (probably, perhaps, definitely, etc.), modal attributes (it is possible that, it is likely that, etc.), formulations of ‘the *in my view* type’, and some mental verbs/‘attribute projections’ (I think that, I believe that, etc.) (105).
- **Attribute** refers to formulations that “disassociate the proposition from the text’s internal authorial voice by attributing it to some external source”; needless to say, such formulations may achieve through grammar of reported speech (111). Propositions might be framed via means of “communicative process verbs” such as *said*, or verbs of mental processes such as *believe* and *suspect*. This sub-category includes nominalizations of such processes such as *someone’s assertion that* or *someone’s belief that*, besides adverbial adjuncts such as *according to someone* or *in someone’s view* (111). It goes without saying that in some cases the external voice is not

specified such as *it is said that* (112). In this case, such a formulation is called “hearsay”.

- ◆ **Acknowledgement** is the first sub-category of attribute. Martin and White (2005) explain that such formulations are dialogic because they “associate the proposition being advanced with voices and/or propositions which are external to that of the text itself and present the authorial voice as engaging interactively with those voices” (112). They add, this is how “they overtly construe the communicative setting as heteroglossic” (112). On the other hand, they are dialogic because “they ground the viewpoint conveyed by the proposition in an explicit subjectivity thereby signaling that it is individual and contingent and therefore but one of possible dialogic option” (113).
- ◆ **Distance**, the second sub-category of attribute, refers to formulations through which the writer distancing “the authorial voice from the attributed material” (113). Typically, it is realized by means of reporting verb such as *claim* or “scare” quotes. Such formulations are dialogistically expansive. That is, they “explicitly ground the proposition in an individualized, contingent subjectivity, that of some external source” (114). Unlike acknowledgement, such formulations present “the authorial voice as explicitly declining to take responsibility for the proposition [; hence,] they maximize the space for dialogistic alternatives” (114).
- ◆ **Hearsay** is the third sub-category of attribute where the writer uses some resources such as “It was said”.

4 Data Collection and Methodology

The data set for the analysis is comprised of some illustrative and representative samples of articles, discussing the issue S. M. Ashtiani, collected from eight English newspapers, namely *The Times*, the *Agence France Presses*, the *States News Service*, *The Australian*, the *Associated Press News*, *The Guardian*, *The Reuters News*, and *The Canadian Press*. Using “Fictiva software”, the study ran a search for the following keyword: *SakinehMohammadiAshtiani*. The data is limited to an eleven - month time period (January, 2010 to November, 2010). The search produced 623 hits in all the selected newspapers (see, Table 1). These articles have been coded by

Factiva software and these codes appear in the appendix (A to H). These eight newspapers are rated by Factiva as being amongst the first newspapers that discussed this issue the most.

In the analysis, the focus is on the type of engagement with other voices/positions (monogloss, heterogloss) to identify the sources of evaluations and how authors construct monoglossic and heteroglossic positions in media discourse.

Table 1 Data Set

The Newspaper	N	%	No. of Articles with Instances of ENGAGEMENT
The Times	215	34.51%	31 (14.41%)
Agence France Presses	149	23.91%	32 (21.47%)
States News Service	52	8.34%	19 (36.53%)
The Australian	49	7.86%	7 (14.28%)
Associated Press News	45	7.22%	13 (28.88%)
The Guardian	40	6.42%	4 (10%)
Reuters News	38	6.09%	13 (34.21%)
The Canadian Press	35	5.61%	4 (11.42%)
Total	8	623	100%
			123 (19.74%)

Newspapers are chosen as a target of the current research because of crucial importance of this medium in contemporary society and the critical role it has played in framing our worldview of reality. According to Van Dijk (2000a), journalists are “central agents” in the process of formulating the discourse and partners in the process of re/producing phenomena such as racism. The current study aims at showing how journalists may promote (mis)conceptions regarding the *Islamic law* in general and stoning in particular through investigating how the resources of ENGAGEMENT they employ in their texts.

5 Data Analysis

Table 2 presents the different strategies of the intertextual representations of the data under investigation.

Table 2 Resources of Intertextual Representation

Newspaper	Intertextual Resources	Total
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	Direct Quotes		Indirect Quotes		Description ⁴		
	N	%	N	%	N	%	
The Times	38	23%	8	5%	2	1%	48
Agence France Presses	28	17%	10	6%	5	3%	43
States News Service	14	8%	3	2%	2	1%	19
The Australian	8	5%	3	2%	2	1%	13
Associated Press News	8	5%	8	5%	3	2%	19
The Guardian	6	4%	0	0%	0	0%	6
Reuters News	9	5%	1	1%	4	2%	14
The Canadian Press	4	2%	1	1%	1	1%	6
Total	115	68%	34	20%	19	11%	168
X ²	95.250						

(critical $x^2 = 4.303$, $\alpha = 0.05$, $df = 2$)

From Table 2, it is notable that the three main intertextual resources identified in the data are direct quotes, indirect quotes, and description. It is also notable that the writers in the data relied heavily on *direct quotes*. When these intertextual resources are compared amongst themselves, the frequency ordering is of crucial importance as well. The comparison shows that direct and indirect quotes are one of the most frequent sources in the data under investigation. In other words, writers employed extensively direct quotes that are attributed to personal and identified sources who are key people with high status in the political world such as Mr. Bush, William Hague, Dilma Rousseff, Yvette Cooper, to reconstruct the image and the reality of stoning.

The second most frequent source of intertextuality is *indirect quotes* which are also attributed to personal and identified sources with high status that have great political influence in the entire world. Needless to say, indirect quotes have the same functions of direct quotes. By way of contrast, the least frequent source of intertextuality is *description* in which the source is not identified; yet, the readers can easily realize and recall the speakers whose statements were repeated and echoed continuously in the news discourse without attributing these statements to their sources. The X² of the total intertextual resources seems to be critical. That is, the presence of such strategies is highly significant.

Hence, these writers have employed these quotes, both direct and indirect, to illustrate authoritative opinions which are believed to be the most influential. Resorting to the fallacy of such key tools in argumentation, i.e.,

⁴ attributions of unidentified sources

authority and *evidentiality*– the terms are van Dijk’s (2000b) - is helpful in two ways: a) audiences often believe in key persons; hence, writers do not need to justify their perspectives and; b) putting the finger of blame to authoritative figures, writers freely and with no excuse maneuver on the subject and spread out their viewpoints and propositions. Furthermore, such intertextual sources indirectly limit readers’ freedom of choice due to the fact that writers and journalists act coercively by choosing whom to report from and whom not. On the contrary, readers may not have access to those who hold a different opinion and whom the newspapers choose not to quote from. As stated previously, the present study also focuses on the linguistic and discursive strategies and resources of speaker-hearer alignment and/or alienation in each newspaper. Table 3 below summarizes the result of ENGAGEMENT analysis of the data under investigation.

Table 3 ENGAGEMENT Resources in the Data

Newspapers	ENGAGEMENT Resources											
	Monoglossic		Heteroglossic					Expansion		Total		
			Contraction		Disclaim							
	Bare Assertions		Proclaim		Disclaim			Entertain		Attribute		
N	%	N	%	N	%	N	%	N	%	N	%	
The Times	25	6%	43	11%	12	3%	6	1%	39	10%	125	31%
Agence France Presses	20	5%	16	4%	2	0%	40	10%	19	5%	97	24%
States News Service	16	4%	11	3%	1	0%	13	3%	16	4%	57	14%
The Australian	8	2%	8	2%	1	0%	9	2%	9	2%	35	9%
Associated Press News	12	3%	6	1%	0	0%	3	1%	8	2%	29	7%
The Guardian	1	0%	7	2%	3	1%	0	0%	7	2%	18	4%
Reuters News	4	1%	13	3%	0	0%	0	0%	15	4%	32	8%
The Canadian Press	0	0%	4	1%	0	0%	1	0%	5	1%	9	2%
Total	86	21%	108	27%	19	5%	72	18%	118	29%	402	100%

The total frequency of the resources employed in the data is of crucial importance as it helps to reveal the ideology of the writers implied in the text. As seen from Table 3, one of the results is in line with the previous result from Table 2, i.e., the direct and indirect quotations. From Table 3, it is very apparent that the newspapers under investigation relied on the ‘attribute’ strategy. The total percentage of this resource made up 29% of all the resources. The second most pivotal resource that is present in all the selected articles as well is ‘proclaim’, which is a crucial resource in these articles. Mostly, it is as important as ‘attribute’. It nearly made up 27% of the employed resources of ENGAGEMENT. The third most frequent resource is ‘bare assertion’. Although it accounted for 21% of the data, a few

newspapers have scarcely employed it due to its ideological function of disregarding any dialogic potential in any position. The other two resources, namely ‘entertain’ and ‘disclaim’, were of less importance, compromising no more than 18% and 5% respectively. It is worth pointing out that the *Agence France* and the *States News Service* utilized the ‘entertain’ resource in a significant manner.

Table 4 below demonstrates the differences between the observed and expected of both the monoglossic and heteroglossic instances as well as contraction and expansion ones based on the *Chi-Square* test which presents the statistical difference between the two sets of frequencies.

Table 4 Chi-Square Test Result

Monoglossic	Heteroglossic	X ²
86	299	117.842
Contraction	Expansion	X ²
127	190	12.521

(critical $x^2 = 12.706$, $\alpha = 0.05$, $df = 1$)

Generally, the higher the *Chi-Square* value, the bigger the difference between the observed and the expected frequencies. Based on the pie chart for the observed and expected instances of the above strategies, the *Chi-square* analysis has revealed that there is a meaningful difference between monoglossity and heteroglossity in the selected corpus. This is maybe due to the fact that writers attempted to suppress and rule out other alternative propositions and not to allow readers’ interventions. By way of contrast, there is no meaningful difference between contraction and expansion. In other words, the observed frequencies are not significantly different from those predicted for contraction and expansion.

The order of the appearance of the newspaper in Table 3 represents the order of the frequency of these resources. The newspaper with the highest frequency, viz., 31%, is *The Times* with 215 articles published in 11 months. On the other hand, the newspaper with the least frequency, namely 2%, is *The Canadian*. Another important point to note is that 79% of the propositions made in the text were heterogloss; whereas 21% of these propositions were monogloss. In the heterogloss locutions, it is evident the dominance of dialogic expansion which accounted for 47% of the propositions; on the other hand, dialogic contraction made up 32% of the resources. There are a number of interesting examples of these resources in the data. The following sections present these different resources in order of frequency.

5.1 Expanding Dialogistic Diversity

As mentioned above, the first most frequent strategy is the ‘attribute’ resource, especially ‘acknowledgement’. In intertextual terms, attributions are relegated to specified sources that are authoritative. Writers usually have the choice of aligning or dis-aligning themselves with these positions through acknowledging the attributed material or distancing themselves from these materials. Some of these propositions in the data described stoning as being *a human rights violation, an abhorrent, barbaric, unacceptable, unjust, unfair, inhumane, brutal, nonsense, archaic punishment*, etc. In addition, stoning was referred to as being *an affront to any sense of moral or human decency that isolates Islam and has no place in a civilized society, which is a form of torture and a practice of another age specifically the Middle Ages*. Such statements were attributed to the speakers using ‘said’. In the data under investigation, the writers acknowledged these attributions; however, the use of ‘said’ is dialogistically expansive and, to some extent, neutral. That is, the authorial voice is not specified; yet, the co-text showed that these writers aligned and associated themselves closely to the evaluative statements of politicians and authoritative sources, more specifically those that evaluated such a practice negatively. Such an exercise is evident in the frequency of the ‘attribute’ strategy and the statements that echoed negative evaluations and which were stated barely in the data (see, section 5.3). Accordingly, the option of *attribute (acknowledge)* carried a high potential for being accepted. Needless to say, such propositions that were quoted and bare assertions can shed light on the selected aspects of stoning that reconstructed its reality according to their ideology. Another subtype of attribute, i.e., *distance*, acts as a way to distance the writer explicitly from what have been said and at the same time shows implicitly that the writer holds a different perspective. For example, the writer in the example below (1) dialogistically expanded alternatives positions by disassociating himself from what he referred to as ‘a claim’; thus, according to him, stoning might not be Islamic and if so it should not be practiced any more.

- The Government of Iran claimed that those practices were Islamic, she said, adding that that was not the case, as many Muslim countries did not adhere to such laws. (Document SNS0000020101109e6b9003ak)

The writer has further maximized the space for dialogistic alternatives by adding another explicit denial saying that this is not the case due to some Muslims countries that do not adhere to this law. It is worth pointing out that

this reasoning is not logical. Saying that this is not Islamic because Muslim countries do not apply it is not sufficient evidence.

5.2 Contracting Dialogistic Diversity

‘Contracting’ is the second most frequent strategy. Amongst the contracting heterogloss locutions, proclamations, especially endorsement, were an important strategy deployed by the institutional voices. The utterances in the examples below are dialogically contractive and usually such a strategy aims at suppressing alternative propositions.

- The UN resolution, which will be adopted in December, expressed “deep concern at serious ongoing human rights violations” Iran, including torture, flogging, amputations and stoning. (Document T000000020101120e6bk000m1)
- The stoning sentence for adultery received global media attention, with the EU calling it “barbaric”, the Vatican pleading for clemency and Brazil offering Ashtiani asylum. (Document LBA0000020101116e6bg000ij)
- European Commission President Jose Manuel Barroso said Tuesday in his first State of the Union address to parliament that he is “appalled” by the news of the sentencing, and called it “barbaric beyond words”. (Document BNW0000020100908e6970000c)
- The stoning sentence triggered an outcry in the West which has labelled it “barbaric.” (Document AFPR000020101111e6bb005by)

The endorsement in these propositions is, to some extent, neutral that helped to delegate the responsibility of the news writers of what was said. Most of these statements that were reported have evaluated stoning negatively. Some of these statements were also echoed in the propositions that were asserted barely (see, section 5.3). Hence, based on the co-text, one can conclude that these writers implicitly aligned themselves to these perspectives. In addition, the news writers also employed “concurrence” through which the writers overtly and coercively showed that the audience is in an agreement with the writers sharing the same knowledge. The following is exemplifying:

- There are aspects of stoning which are particularly abhorrent ... (Document AFPR000020100910e69a005sq)

In example (6), the description of the abhorrence of stoning is double-concurred by the writer through the use of ‘particularly’ to contract the space of dialogic alternatives and not to allow the reader to argue against. In some instances in the data, the institutional voices were closed down the space for dialogic alternatives as well by positioning themselves as rejecting contrary positions through disclamations (dis-endorsement), specifically denial and counter expectation. It is important to note that disclaim resources are among the least resourced in the data. The following are some selected examples:

- The Prophet’s surprisingly liberal stance on claims of extramarital sex was shaped by personal experience. (Document T000000020101106e6b60000y)
- However, stoning to death is not mentioned in the Koran or the Hadith, the sayings of the Prophet Muhammad. (Document T000000020101106e6b60000y)
- The Government of Iran claimed that those practices were Islamic, she said, adding that that was not the case, as many Muslim countries did not adhere to such laws. (Document SNS0000020101109e6b9003ak)

The maximally contractive propositions and the underlined ENGAGEMENT resources above were formulated by the news writers to invoke and replace prior propositions, namely stoning is an Islamic practice. The propositions in the examples (7-9) and mother instances in the data revolved mainly around the legislation of stoning as an Islamic practice. These propositions promoted the idea that stoning is not an Islamic practice, although some may believe it is. Even if it belongs to Islam, writers tried to show that stoning is a form of old-dated practices and it is not practiced any more in most Islamic countries. The negation of the possible alternative did not only invoke the positive, i.e., stoning is an Islamic practice, but it also introduced ‘polarity’ into the discourse through introducing a counter-expectation. Using such resources enabled the writers to align the reader into a position of opposition to stoning. This is expressed not only by the denial but also by the fact that the writers provided argumentative material to support the denial of the prior propositions. In short, employing the different sub-strategies of contracting dialogistic diversity helped to exclude any alternatives that may confirm that stoning is a legislated Islamic practice as well as align the readers into the propositions stated in these newspapers.

5.3 Denying Dialogic Diversity

White (2003a) explains, barely assertions are usually connected to consensual “knowledge” or “versions-of-events which are seen as “fact”—that is to say, with propositions held to be unproblematic and generally “known” or “accepted” in the current communicative context” (p.263). Nevertheless, some of the evaluations of the bare assertions that are depicted in the corpus were not generally accepted, at least from the perspective of the Muslims who believe in stoning, or known by the common people, in particular non-Muslims. From Table 3, it is apparent that the number of bare assertions in some of the selected newspapers is not considerably high. Yet, there are a considerable number of key evaluations that is formulated monoglossically in some newspapers such as *The Times*, *the Agence France*, and the *States News Service*. One of the most pivotal evaluations in the selected newspapers was related to the construction of Iran, as being a violator of human rights whose rulers, who represent barbarism, are regressing to the Middle Ages.

- Ms.Ashtiani has come to symbolise the barbarity of Iran’s rulers. (Document T000000020100828e68s000a1)

Through using such monoglossic assertions, the writer took it for granted that practicing stoning by Iran was a sign of its unfair judiciary and barbarism. Such a proposition which was represented as being unchallenged statements represented explicitly Iran, and implicitly stoning, in a negative way. Through bare assertions, newspapers labeled Iran as a violator of human rights, in particular women’s rights, because of their application of stoning which is an Islamic practice as many Muslims believe. In other words, stoning, which is considered as a violation of human rights from the writers’ perspective, was expressed monoglossically as being unproblematic, well known, and agreed on.

Furthermore, some bare assertions in the selected newspapers directly and explicitly reconstructed the image of stoning itself from the writers’ point of view echoing the statements of the political figures whose statements were cited.

- The rise in executions mirrors a surge in brutal punishments in recent months, including amputations, stoning and floggings. (Document T000000020101027e6ar000aq)
- This is a barbaric punishment (Document AFPR000020101103e6b30063m)
- Stoning is a form of terrorism. (Document APRS000020100730e67u0029s)

As noted above, these examples (11-13) echoed many of the (in)direct quotes of some of the politicians who commented on stoning. In these examples, writers did not only describe stoning as a brutal punishment, but also persistently used continual propositions that establish a serious implicit conflict between Islam and modernity. These assertions helped in introducing Islam and Islamic practices as being from another age. The extravagant frequency of such statements in the data left no space for readers to doubt in the veracity of such statements that promote the idea that stoning, and to a lesser degree Islam, is barbaric and outdated. By constructing these bare assertions as single voiced did not allow any dialogistic alternatives that one may recognize or get engaged with. In short, the combination of the bare assertions and the negative evaluations of the writers established an authorial assertiveness as well as a particular relationship between author and readership. Through such monoglossic and undialogized propositions, writers attempted to align their readers coercively to these propositions, challenge those who might disagree with them, and exclude a vast majority of Muslims' voices. In short, as White (2003a) explains, these bare assertions "represents a particular intersubjective stand" (265).

6 Discussion

The close investigation of corpus showed that APPRAISAL framework in general and ENGAGEMENT in particular is one of the analytical tools that can reveal the positions writers may hold towards the topic under discussion. Fairclough (1992b: 290) explains, the intertextuality of discourse complicates the processes of interpretation because one has to work out how to the different elements can fit in the discourse meaningfully; however, ENGAGEMENT resources help to understand the different alternative perspectives and propositions news writers choose to negotiate other propositions on their behalves and their readers'. Keeping in mind the CDA/Appraisal theory-method linkage, this study conducted an interpersonal analysis of the intertextuality in the writers' news discourse in order to unwrap how the image of stoning as an Islamic practice has been (mis)represented in the data under investigation. A common theme throughout the paper here is that the propositions in which textual production was conventionalized and constructed upon are the same propositions which powerful figures proposed to construct the image of stoning. The current study also pointed to the pivotal role not only of the texts, but also the heterogeneous ways in which different parties in a given setting contextualize the same ideas from different perspectives. News writers

reported Ashtiani's case focusing on representing the idea of stoning, rather than the case itself, from a Western point of view.

By analyzing intertextuality, researchers aimed to reveal the position of these newspapers towards stoning. To some extent, it is very evident how the newspapers were so careful in commenting on this issue as a result of its sensitivity. Thus, they relied heavily on (in)direct quotation, which have dual actions: (1) to persuade the readers and most importantly (2) to shift the blame in case the readers are not satisfied with what has been said. Although the writers significantly used quotations in a neutral way to express the speakers' perspectives regarding stoning, they rarely distanced themselves from the speakers they cited. Furthermore, they reestablished these perspectives in their statements that were barely asserted; a factor that may help to closely associate these writers to the attributed statements.

One of the main crucial themes some of these propositions of the authorial voice have proposed is Islam vs. Modernity, which has become a pivotal slogan and a prevailed propaganda in the selected discourse concerning stoning and Islamic law. In addition, the writers implemented dialogically expansion to include alternatives voices and positions and show the likelihood of the unfairness of the Iranian judgment system as it still practices old-dated Islam and did not *harmonize* itself with other "modern Islamic countries" which do not practice such a barbaric "old-fashion Islamic law". Through frequently attributing such a practice to Iran only, the writers showed Iran as being deviant. In short, the case of dialogically expansion is interesting because, at a close look, they acted to contract the scope of point of view. In other words, instead of raising the possibility that Iran was applying Islamic legislations, news writers raised the probability of the unfairness of Iran law and its violation of human rights, specifically women. Hence, the writers only included the selected negative views about Iran striking through the other possible positions.

By the same token, bare assertions helped in obscuring the possibility of dialogic alternatives. More specifically, these propositions showed that stoning is not an Islamic practice, and this reality is not controversial in the Islamic world either, which is not true. This is not true simply because of the polarity these writers created through using the denial strategy. Claiming that such a practice is not Islamic introduces other voices who claim that this practice is Islamic. Needless to say, many Iranian speakers clarified that this is an Islamic practice and not an Iranian practice. Yet, their statements were not reported or challenged by the news writers.

In short, the analysis provided us the opportunity to examine how different ideologies and perspective could be constructed and challenged through discursive practices and how lexicogrammatical and discursive

resources were used and valued by media to discuss sensitive topics. More specifically, the news writers utilized the external voice to comment on stoning; yet, from the analysis it is evident that the media presented a single perspective and position with respect to stoning challenging and denying the other possible positions. In spite of the high frequency of the expanding heteroglossic positions, the analysis showed that the perspective that stoning, which is barbaric, outdated, and un-Islamic, is a well-established set of beliefs in the discourse of the data. Hence, the readers were not given any choice but to align themselves to such a perspective which in some way could not be avoided.

7 Conclusion

As noted in the introduction, this study locates itself within the field of CDA, which is a theory of discourse as well as a method for analyzing it (Chouliaraki & Fairclough 1999: 16). In addition, the systematic functional approach that Martin and White (2005) develop provided a comprehensive framework to examine discourse from different perspectives. Within the framework of CDA, the current study investigates how media represented Islamic law in general and stoning in particular by shedding light on the resources of intersubjective stance (or ENGAGEMENT) in the selected articles that discussed the issue of S. M. Ashtiani, who attracted media attention and caused an international outcry. Although this paper is limited to one subsystem of APPRAISAL, it could be suggested that news writers align themselves in different ways to the influential political figures who evaluated stoning in a negative way and whom they chose to cite in order to challenge any voice which may present a different perspective. Yet, to have a broader perspective of how stoning has been appraised in mass media discourse, a more comprehensive analysis that goes beyond these resources is required and encouraged to shed light on how stoning has been appraised through examining the other two subsystems of the APPRAISAL framework: ATTITUDE and GRADUATION.

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Bionotes

Ahlam Al-Harbi (Ph.D. in Linguistics) is a lecturer at the English Department in the Faculty of Arts, Taif University, Saudi Arabia. She is also accredited by ATN-APTS as a freelance translator. Her primary research interests are sociolinguistics, critical discourse analysis, media/political discourse, feminine studies, and forensic linguistics. She has a TEFL

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Appendix

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