

AUTHOR ATTRIBUTION IN SUICIDE NOTES: EVIDENCE FROM APPLIED LINGUISTICS

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Abstract: Authorship attribution is a branch of authorship identification whose aim is to examine the characteristic features of a piece of writing to establish its author. The present study applies the methods and techniques of forensic and applied linguistics to the analysis of a suicide note believed to have been written by a 49-year old brigadier in the Iraqi Army who was found shot in the head. The accident was regarded as a suicidal act, which the family of the deceased challenged. They suspected an assassination disguised as a suicide and claimed that the suicide note left close to the deceased was either a mere fabrication, or was written under duress. The present study attempts to verify these assumptions using the techniques commonly followed in authorship attribution in analyzing the form and content of the suicide note and comparing it to a text that is known to have been written by the deceased. The results indicate that the suicide note was not simulated or tampered with and was not written under threat or duress.

Key words: Suicide notes, Author Attributes, Forensic Linguistics, Applied Linguistics.

USTALANIE AUTORSTWA LISTÓW SAMOBÓJCÓW: DOWODY NA PODSTAWIE OPINI BIEGŁYCH Z ZAKRESU JĘZYKOZNAWSTWA STOSOWANEGO

Abstrakt: Ustalanie autorstwa tekstów polega na analizie dyskursu stosowanego przez domniemnego autora tekstu w celu odnalezienia typowych dla jego idiolektu cech. W niniejszym artykule przedstawiono analizę listu samobójcy, którym był 49 letni brygadier z Armii Iraku, którego znaleziono z raną postrzałową głowy. Rodzina zmarłego poddała w wątpliwość fakt popełnienia przez niego samobójstwa, twierdząc, że list został bądź sfabrykowany bądź napisany pod wpływem groźby. Badanie listu przy wykorzystaniu technik językoznawstwa sądowego i stosowanego wykazało, że list nie był ani sfalszowany, ani napisanie go nie zostało wymuszone na autorze.

المستخلص

يعد التعرف على مؤلف نص ما فرع من فروع تمييز المؤلف والذي يهدف إلى معرفة السمات التي تميز نصاً مكتوباً ويُعزوه إلى مؤلف معين . يسعى البحث الحالي إلى تطبيق طرق وتقنيات علم اللغة التطبيقي في مجال علم اللغة الجنائي ، إذ يهتم بتحليل رسالة انتحار وجدت قرب جثة المتوفى وهو ضابط برتبة عميد في الجيش العراقي توحى بان المتوفى كان قد كتبها . عُذ الحادث عملاً انتحارياً بينما أدعت عائلة المتوفى ومعارفه على أن الحادث عملية اغتيال اتخذت شكل انتحار وان الخطاب كان مفبركاً أو كُتبت تحت التهديد أو بالقوة . يهدف البحث إلى التحقق من صحة المزاعم أعلاه مستخدماً الطرق المتعارف عليها في التحليل النصي لرسالة الانتحار شكلاً ومضموناً ومقارنته بنصوص سبق للمتوفى أن كتبها . بينت النتائج بان رسالة الانتحار كانت حقيقية وغير منتحلة ولم يجرى عليها أي تحريف كما إنها لم تكن كُتبت تحت ضغط أو تهديد .

1. Introduction

Suicide is defined as the action of killing oneself intentionally. It is not a crime in itself; yet aiding, abetting, counseling or procuring a suicide is punishable in almost all statutes (Hooper 1968; Martin 1997:451). Many scientific disciplines like psychiatry, philosophy, sociology and ethics tried to find reasons for this act of voluntary and intentional self-destruction. Carver (1959:533) summarizes the main causes of suicide as frustration leading to hostility which is turned inward upon the self instead of outward toward another person; loss of love; feeling of rejection; feeling of guilt and desire for vengeance; and the desire to escape from physically painful situations.

Suicide is a form of homicide in which a person vents emotions against the self whereas in homicide emotions are vented against another person (Carver 1959:534). Also, suicide is usually accompanied by a suicide note which may provide evidence on the deceased person's intentions (Richardson & Breyfogle 1947:490).

Suicide notes are potentially valuable sources of information about the suicidal person's psychological states (O'Donnell et al. 1993:45). They also offer an invaluable source of insight into what brought about the deceased person's suicidal behavior. Suicide notes „contain an unsolicited account of the victim's thoughts and emotions regarding his intended act and, often, what he felt was responsible for it" (Jacobs 1967:62).

Suicide notes differ considerably in form, content, motives, style and wording; however, they also share some general features of form and content. Osgood and Walker(1959), who identify a number of features that characterize the structure and content of suicide notes, conclude that structurally suicide notes are characterized by shorter, less diversified sentence fragments" (cited in Jones & Bennell, 2007:220). This might be due to the fact that suicide is usually committed under high level of emotional arousal when only the salient features of the message are highlighted.

Another salient feature in suicide notes is the „high percentage of nouns with preponderance of references to persons and concrete objects" and action verbs because these two parts of speech are semantically richer than others in expressing one's feelings and actions (Jones & Bennell 2007:221).

The content analysis of genuine as opposed to simulated suicide notes Jones & Bennell, based on relevant literature, conducted resulted in the following five characteristic features:

- (i) The total number of words is typically greater in length. This is an index of heightened cognitive state experienced by the suicidal.
- (ii) The high frequency of instructions to survivors regarding insurance or requests to notify one's next kin to perform actions which the suicidal is unable to accomplish.
- (iii) High frequency of positive affect expressed in the form of affection, gratitude or concern towards survivors, with terms of endearment as well as a backdrop of despair inherent in the note.
- (iv) Less likely to provide an explanation for the ultimate action.

- (v) External locus of control, ascribing the behavior and circumstances to fate and luck.

In another research based on the analysis of suicide notes of persons who succeeded in suicide, Jacobs (1967) singles out a number of content features that are recurrent in most of the suicide notes analyzed:

First, the problem which lead to the suicide is not the victim's own making, and the suicidal person's woes have a long-standing history whose escalation has reached a point beyond human endurance.

Second, death is seen as necessary in the light of the circumstances experienced. Third, the suicide victim begs for the survivors' indulgence and forgiveness because what he/she has experienced cannot be expressed in words (e.g. "Please, forgive me, I cannot endure any more pain"). Fourth, some letters involve the last will and statement as well as some examples or notes of instructions. Finally, religious persons, believing that the suicide will outrage God, usually end the suicide note with „May God help and forgive me for what I am about to do”.

2. Authorship Analysis: Literature Review

Assigning a particular text to a particular person or time period has a long history. The general purpose to establish a probable link between an author and a particular text; it is „a process of examining the characteristics of a piece of writing in order to draw a conclusion on its authorship” (Zheng et al. 2006:4). This process is used in a broad range of applications, the most important of which are: identifying the writer of anonymous text(s) or document(s); detecting plagiarism; and judging whether a claimed authorship is valid, etc.

Authorship analysis has three subfields: authorship identification or authorship attribution, authorship characterization, and similarity detection (de Val, et al. 2001:8). Authorship attribution determines the likelihood that a text or document was written by a particular author. Authorship characterization provides an author's profile of characteristics based on a disputed piece of writing. These characteristics involve the gender, the social and cultural background, and the psychological state of the author at the time of writing the text. Plagiarism or similarity detection is the process of comparing two or more pieces of writing, without necessarily determining the author, aiming at deciding whether the texts compared were written by the same author or not, or to determine whether the analyzed piece of writing has been plagiarized.

Gray, Sallies & MacDonell (1997:2f) suggest four principal types of authorship analysis: author discrimination, author identification, author characterization, and author intent determination. Author discrimination aims at deciding whether two or more texts were written by a single author or by multiple authors. The goal of author identification is to determine the likelihood that a particular person is the author of a disputed text. Author characterization identifies some characteristics of the author such as personality, age, linguistic or educational background based on the stylistic features of the analyzed text. Author intent determination specifies, for example, whether the code that had an

undesirable effect was written with deliberate malice or was the result of an accidental error. To verify authorship, various kinds of evidence are used. Corny (2003) points out that three sorts of evidence are most frequently used to establish authorship: external, interpretive, and linguistic. External evidence includes the author's handwriting or signed manuscript. Interpretive evidence includes indications of the author's intent when writing the document compared with other works written by the same author. Linguistic evidence emphasizes the actual words and patterns used in the document under investigation.

The linguistic evidence to verify authorship is based on the assumption that every speaker or writer uses a unique idiolect "which manifests itself in distinctive and idiosyncratic choices in the text" (Halliday, McIntosh & Stevens 1964:75). Thus, every speaker or writer, for example, has a unique set of active vocabulary items built up over years which differs, in many respects, from the active vocabulary of another speaker or writer. Also, every speaker or writer has a unique preference for lexical items, collocations, clichés, and structures. These accumulated observations led Coulthard (2005:5) to suggest that a linguistic fingerprint, similarly to the fingerprint or signature, can be used to identify people.

The use of modern linguistic techniques in authorship attribution dates back to 1887 „when Mendenhall first created the idea of counting [text] features like word length" and Yule and Morton used sentence length to determine authorship (Taş & Görür 2007:152). Other scholars came up with adding word frequencies or lexical repetition to the set of linguistic features examined in identifying authorship. Mosteller and Wallace (1964) paid special attention to the frequency of function words to establish the authorship of disputed works (Zheng et al. 2006:7f). Most famously, Moesteller earned fame by using function word frequency in identifying Madison or Hamilton as the author of each paper in *The Federalist Papers*. Allen (1974) suggested a stylistic analysis for author attribution identifying average word length, sentence length, distribution of parts of speech and vocabulary as criteria for attributing a questionable text while in 1987 Burrows developed a set of fifty high frequency words to be tested on *The Federalist Papers*.

Holmes (1985) listed a variety of criteria to judge authorship, including average syllables per word, average sentence length, type-token ratio of the lexical items, and word frequency distribution; while Foster (1996) suggested examining patterns in linguistic habits, such as spelling, syntax, and rare words to identify authorship (Corny, 2003:17-19).

Corny (2003) used stylometric techniques such as style markers. Stylometry is based on the assumption that each author has his own stylistic habits in choosing and using words, phrases and structures. These habits are said to be unconscious and deeply ingrained "meaning that even if one were to make a conscious effort to disguise one's style this would be difficult to achieve" (Corney 2003:14).

Forensic authorship analysis has benefited from the techniques used in authorship analysis in investigating issues pertaining to what Shuy (1993) called language crimes such as threats, extortion, trade infringement, black mail, mining e-mails, bribery, etc. Linguists working on language crimes prepare admissible, convincing, and objective evidence for presentation in the court of law.

Allen(1974:906) maintains that at any given moment each “writer or speaker will have certain subconscious habits of using a finite number of words at his disposal based on his education, interests, individual idiosyncrasies etc. these features are subconscious in the sense that it is hard for a person to change them at will.

Goodman et al. (2001), Corny (2003) de Val et al., (2001) employed content independent features especially function words, such as “the,” “if,” “to,” as well as punctuation marks to determine authorship in different contexts. Chaski (2002) used three groups of techniques for authorship attribution: syntactically classified punctuation and syntactic analysis of phrase structure; sentential complexity, vocabulary richness, readability and content analysis; and forensic stylistic techniques such as spelling errors, punctuation errors, word- form errors and grammatical errors (Corny 2003:30). Zheng et al. (2006) developed a framework based on four types of writing style features: lexical, syntactic, structural, and content- specific.

Stylistics and discourse analysis were found particularly relevant to forensic linguistics, especially the assumption that “it is possible to identify, describe and measure a writer’s individual style or idiolect by careful linguistic observation and analysis of his/her unique set of linguistic choices” (Guillen-Neito et al., 2008:4). Recently, identifying an individual’s style and measuring his/her use of style markers are mostly done by using software tools. For example, Morton (1996) developed a cumulative Sum Analysis (a general mathematical formula and graph producing method) for identifying authorship in attribution cases presented in the court of law (Jordan, 2002: 84).

Corny (2003) suggested a Support Vector Machine--light version-- as a tool for authorship attribution of e-mail messages in which stylistic features were selected for analysis. Guillen-Nieto et al. (2008) identified four most recently used software tools in forensic authorship attribution. The first two tools JVocalyse V2.05 and Copy Catch Gold V2 were developed by David Wools (2003) of CFL software Development in collaboration with members of the Corpus Forensic Linguist group at the University of Birmingham. The third tool was called Signature Stylometric System V1.0 designed by Peter Millican (University of Leeds) while the fourth one was called Wordsmith Tools V4.0 /5.0 developed by Mike Scott (University of Liverpool). All of these software tools were particularly used to help quantitative treatment of grammatical and lexical features as well stylistic markers.

Error analysis has also been used for forensic purposes in author attribution. Originally, error analysis was first used in second language pedagogy to refer to a set of techniques or producers used for identifying, classifying, describing and systematically interpreting unacceptable forms produced by the second language learner (Crystal 1991: 125; Ellis and Barkhuizen 2005: 51). Corder (1981: 10) distinguishes errors from mistakes. Errors are of systematic nature; they indicate a defect in acquiring the system of the target language. Mistakes are non-systematic and random. They are due to memory lapses, physical states, such as tiredness, strong emotions like anger or joy, etc. Mistakes are errors of performance, not competence.

Hubbard (1996) applied error analysis techniques to author identification in extortion letters with threats of poisoning the food stock in a chain store if \$500-000 was not delivered (cited in Jordan 2002:114). He classified errors into the following types: lexis, word

order, tense, negation, agreement, pronominal, relatives, articles, demonstrative pronouns, prepositions, spelling and punctuation. He found that the errors identified in the extortion letters most closely resembled those of the suspect.

Yet, Jordan warns that the results of error analysis must be interpreted with great care. A person may intentionally make errors, or may unknowingly produce one form in one setting and another in another setting, which complicate the analysis (Jordan 2002:116).

Text analysis is also relevant in authorship analysis. Unlike a sentence, a text “is not a grammatical unit but rather a semantic and even a pragmatic unit” (Quirk et al. 1985:1423f.). For Halliday and Hassan (1976) a text is a unit of language in use, a unit of determined by meaning, not form; Brown and Yule (1983:191) maintain that a text, is a connected sequence of sentences depends on cohesive relationships within and between the sentences that force co-interpretation which can be formally established with a text providing cohesive ties which bind a text together”. Halliday and Hassan (1976) provide a detailed description of the types of formal markers which relate what is about to be said to what has been said before. These text or discourse markers are additive, e.g., „and,” “furthermore”; adversative, e.g., “but,” “nevertheless”; causal, e.g., “so”, “consequently,” and temporal, e.g., “then,” “an hour later.”

The cohesive relationships that particularly tie the text components together are reference, (the expressions that direct the reader/hearer to another part of the text for the interpretation of certain linguistic items); substitution (the replacement of one linguistic item by another); ellipsis (the omission of linguistic items); and lexical relations like hyponymy, synonymy, collocation, comparison, or syntactic repetition.

A part from cohesion, coherence is „a semantic property of a discourse¹, based on the interpretation of each individual sentence relative to the interpretation of other sentences” (Van Dijk 1977:93). The main function of coherence is to contain information distribution in the text, by means of introduction, continuity, expansion, focusing, topicalization, etc. (Van Dijk 1977:95). In fact, relationships between sentences or propositions may exist without being explicitly expressed, i.e., without being marked by cohesive devices. Similarly, it is possible for a text to be cohesive without being coherent, and a text may include cohesive devices of various kinds, but lack the semantic structure that makes it a coherent text (Finch 2000:211). Therefore, cohesion and coherence complement each other in maintaining sense and unity in a text.

Discourse or text analysis has been used in the legal domain for forensic purposes since the early 1990s for comparing undisputed or known texts with disputed or anonymous texts, with special emphasis on handwritten records of interviews made by police officers with witnesses and suspects and the statements dictated by witnesses or defendants to police officers (Coulthard 1992:243). Text analysis in these settings is applied to provide linguistic evidence when, for example, a convicted offender claims that the police officers have fabricated the whole or part of an incriminating interview or statement.

¹ Discourse" and "text" are used interchangeably throughout this article.

In spoken discourse, the analyst should account for what Grice (1975) calls 'cooperative principles'. The cooperative principle dictates that one's contribution to discourse be informative, truthful, relevant, brief, unambiguous and orderly (Grice 1975). The text or discourse analyst should pay special attention to the types, manner and location of violations of the maxims above and provides persuasive reasons for the detected violation (Coulthard, 2007:28).

Three types of analysis are typically performed: topic analysis, response analysis and topic flow analysis (Jordan 2002:101). In topic analysis the emphasis is on the topics related to the case but avoided by the defendant; response analysis focuses on the types of responses made; while the topic flow analysis concentrates on how the topic starts, develops and ends. The ultimate aim of text analysis for authorship identification is to provide evidence on whether the disputed text can or cannot be attributed to the suspect or offender.

The review above clearly indicates that linguists and practitioners have used various techniques in authorship attribution analysis and not one technique has proved to be the best. What applies to one case or context might not apply to another case or context. Also, no technique alone could exclusively confirm or disconfirm that an anonymous text can be attributed to a specific suspect. Therefore, one may safely conclude that more than one technique can be used in analyzing and comparing the known text with the disputed one(s). Also, non-linguistic and cultural dimensions should be accounted for in any authorship analysis if a relatively complete analysis is sought. This is what the present study tries to do when analyzing the actual suicide note to find out its authorship.

3. The Case Under Investigation

On November 16, 2002, a forty-nine-year old brigadier in the Iraqi army was found shot in the head in his small garden with a suicide note left near him. The victim S. was a father of five children. He came from a poor family with strong religious values. S. was married to K., a thirty- six- year old woman who was a housewife and did not have much education because she dropped out of elementary school. K. and S. lead a traditional family life, which was probably not very happy because of their different educational background, the disparity between their aspirations and views of life, with each inhabiting his or her own world. K. always complained that S. never talked to her about his military life and problems when he came back home, and she knew very little about his work, his relations and friends.

S. was a brilliant soldier. His personality, seriousness, courage and dare earned him a high reputation in his job, but he also had many enemies and few friends. He was honored many times by the military leadership. A year or two before the accident, S. was sent home for a mandatory five-month vacation because of a quarrel with his commander on a financial matter. S. did not want to be involved in financial corruption. Then, he was asked to return and assume a military consultant position. Few months before his death, S. had been haunted by the feeling that he was being watched. He told his brother A. and his friend M. that he felt as if he was monitored and watched by someone wherever he

was going, and even when he was at home. Few days before his death S. told A. and M. that he suspected that his home was under surveillance and tapped by a device recording his and his visitors' moves. Few days before the accident, S. seemed very lonely and was feeling very much depressed, a close friend M. reported.

On the morning of 22 October, 2002, S. dressed up in his military uniform waiting for his companions to go to the office in Baghdad. According to his wife, S. sent his wife and children to her parents' house nearby. Shortly after, a gunshot was heard, and S's body was found lying in his small garden, with a wound from a gunshot in the head that apparently instantly caused his death. Five meters from the body there was a suicide note.

The neighbors confidentially told S.'s wife later that they had seen two or three men approaching the home then running away hurriedly when the accident took place. A month later, another neighbor told S.'s brother also confidentially that one of these men might have been spotted in the hospital making sure that S. had been dead. Yet, based on the forensic medical report, the police regarded the accident an act of suicide. S.'s relatives and friends, however, did not trust the police report and the forensic medicine department simply because the victim was a religious man, optimistic, highly ambitious and someone who was seen as most unlikely to commit suicide. Therefore, friends and family suspected assassination disguised as a suicide. At the time of the accident, nobody dared to press charges because of the oppressive political climate and fear of terrorism. An important element in support of the family's claim, the suicide note found near S.'s body was assumed to be planted and fabricated, or to have been written by the victim under duress or threat.

4. The research questions

The present research is particularly interested in the linguistic analysis of the disputed suicide note found near the victim's body. The aim is to provide objective answers supported by linguistic evidence to the following questions:

- (i) Is the suicide note genuine, i.e., written by the deceased, or simulated, i.e., written by someone else and left near the victim to suggest a suicide?
- (ii) If written by the deceased, was the suicide note tampered with?
- (iii) Was the suicide note written under threat or duress?

5. The Framework of Analysis

In order to provide research-based answers to the research questions already raised, a linguistic analysis of both form and content of the questionable suicide note was conducted. Then, the findings were compared with a text „Letters to my sons” known to have previously been written by the deceased person S.

Based on the assumption in the authorship attribution literature that every speaker or writer has his own distinctive and idiosyncratic choices of specific lexical items, word combinations, grammatical structures, cohesive devices as well as the way the ideas are

organized, both micro-and macro-linguistic features were identified. The micro-linguistic features identified in the analyzed texts were the following: the number of words per sentence, the most frequently used words and word combinations, specifically, binominals and collocations, and the most frequent errors in spelling, grammar and punctuation. The analyzed macro-linguistic features include the most frequently used cohesive devices, paragraphing as well as coherence.

Each level of linguistic analysis had its own objectives. In micro-linguistic analysis, the objective was to provide linguistic evidence to decide whether the suicide note under question was or was not written by the deceased person S. The objectives of the macro-linguistic analysis were two-fold: to provide more evidence on the authorship of the disputed suicide note and to present objective evidence that the suicide note had not been tampered with or written under duress or threat.

6. Results and Discussion

Following the above described procedure, a linguistic analysis of the form of the disputed suicide note was first made. It was found that

- (i) The disputed suicide note is relatively long. There are a lot of details. The sentences are very long. The average number of words per sentence is 41 words. The aim behind using long sentences might be the suicide victim's desire to provide a complete account of how he was feeling while writing the note and to prove his innocence to the political leadership and the country.
- (ii) The preponderance of reference to people by names. This may be due to the deceased person's expectation that the note would be read by those whose names were mentioned namely, Uday or Saddam Hussein himself.
- (iii) The words used more than once in the note were: 'قلق' worried, 'عقل mind, 'تتابني' haunted, 'مخاوف' victim, 'معلقة' suspension, 'الشرطة' police, 'إحساس' feeling, 'فشل' failure, 'خيبة أمل' disappointment, 'مخلص' faithful, 'أمين' honest, 'برئ' innocent. These words reflect the cognitive state of the deceased before committing the act of suicide. They also imply his intention to commit the suicide.
- (iv) The frequent use of words in combination, especially binominals and collocations. Two types of combination are apparent in the texts under investigation: binomials in first place and collocations in the second.

Binomials or "irreversible freezes," as they are sometimes called, are fixed expressions or constituents of two constants having the same word class and linked by grammatical items, frequently "and," or "or." (Gramley & Pätzold 1992:70). These constituents can be independently meaningful as in "bread and butter", or they can be idiomatic as in "head over heels." Syntactically, the two constituents have the same word class: noun+ noun, verb + verb, adjective +adjective or adverbs, such as "gold and silver", "day and night", "landings and take offs"; "rise and fall"; "black and white", "bad and good"; "sooner and later", "logically and objectively".

This phenomenon has been extensively studied and found to be available in most natural languages. The most comprehensive studies of binomials to date are Malkiel

(1959) and Benor & Lavy (2006). In Arabic, two seminal articles by Bakir (1999) and Gorgis & AL-Tamimi (2006) recently also studied binomials.

One of the characteristic features of the texts under investigation is the extensive use of various types of binomials. As for the disputed suicide notes, the frequently used binomials were mostly of the noun + noun type. For example: 'الكذب والرياء' lie and eye service, 'جهة أجنبية أو محلية' foreign or local, 'الشرف والأمانة' nobility and honesty, 'الإخلاص والإخلاص والدقة' sincerity and persistence, 'بلدي وحزبي' my home and party, 'الإخلاص والدقة' preciseness and loyalty, 'الاحترام والتقدير' respect and appreciation, 'جهد وكلل' diligence and hard working, 'الفشل وخيبة الأمل' failure and disappointment. There were 14 of this type of binomials in S.' suicide note.

"Collocation" is a term first used by the British linguist John Firth (1957) to refer to the tendency of certain words to occur together. For Robins (1971:63) collocation is "the habitual association of a word in a language with other particular words in sentences". For Gramley & Pätzold (1992:61), collocation refers to "combinations of two lexical items which make an isolable semantic contribution, belong to different word classes and show a restricted range".

Structurally, collocation is divided into two elements: the node and the node's collocation, and the relation that holds them together is the span (Sinclair 1966). In the phrase "struggle desperately" the verb "struggle" is the base while the adverb "desperately" is the collocate; likewise in "commit a crime" commit is the node while "a crime" is the collocate. As for the suicide notes, the collocations most frequently used expressed feelings of disappointment, 'ينظر بعين العطف' feel pity for, 'الأب الحنون' loving father, 'الكره المتعصبين والمتطرفين' dislike extremists and fanatics. 'تصور خاطئ' false conception, 'الجوانب السيئة' negative aspects, 'خدمتي في الجيش' military service, 'العقوبات الجائرة' unfair sanctions.

- (i) At discourse level, the cohesive devices commonly used were (و) 'and', 'or' أو typically used to combine 'noun and noun', 'adjective and adjective' and 'verb and verb'. (و) 'and' was also used to combine paragraphs. The word 'لقد' was used to introduce three paragraphs 'لقد بدأت أشعر' 'I started feeling', 'I have spent all my life' 'لقد أمضيت طفلة حياتي' and 'لقد كانت حياتي كلها' 'All my life had been'.

As for content, the suicide note indicates that:

- (i) The use of the word "مكروه" "bad thing" in the first sentence in the note implies that he has already made up his mind to do something and he perfectly knew that what he was going to do is a bad thing.
- (ii) In the first paragraph, the writer confirmed that he would tell the plain truth and that he would never tell lies or be a hypocrite. But in the last two paragraphs, he praised Saddam Hussein and his son Uday whom he always criticized when talking to his family or friends. This may be due to the expectation that the suicide note would be read by Uday or his father Saddam Hussein owing to the suicide victim's close relationship with them.
- (iii) The recurrent expressions of feelings of "failure and great disappointment," "feeling as if everything has turned against me", "fear of torture" also shed light on S's intention to terminate "the failure" and "agony" he had suffered from for so long.

- (iv) Although S. mentioned that he committed suicide in order to avoid the torture he might suffer from to make him confess, he ascribed his act to fate and bad luck.
- (v) S. finally begged president Saddam Hussein and his son Uday for indulgence and forgiveness and to look upon his family and sons with affection and kindness.
- (vi) S. ended his note with a testimony that God be the witness to all that he had said.

A comparison was then made between the suicide note (henceforth text A) and a text known to have been written by the deceased and entitled "A letter to my sons" (henceforth Text B), which seemed to have been written shortly, probably a month or two, before S's death. The aim was twofold: to see whether the two texts could be ascribed to the same or different author(s), and to ensure that the whole or part of Text A had not been fabricated or tampered with.

Before doing the comparison, a linguistic analysis of Text B "A letter to my sons" was conducted. The same criteria used in analyzing the form and meaning of the suicide note were also applied to Text B, "A letter to my sons". At the level of form, Text B was found to have the following characteristics:

- (i) The sentences were very long. The number of words per sentence was 41.
- (ii) The words most frequently used were 'مراقب' monitored, 'أحاسيس' feelings, 'وصية' will, 'عقل' mind, 'منطق' logic, 'خوف' fear, 'شك' suspicion, 'حسد' envy, 'كرهية' hatred, 'تنتابني مخاوف' haunted, 'مخابرات' intelligence, 'ندم' repentance.
- (iii) Reference was made to the places where S. had been working, especially College of Military Staff, Military College, but no reference was made to persons with whom he was working, except for authors of the books he read like Ibnul Faridh, Ibin Rushd, Socrates.
- (iv) Words in combination, especially binomials and collocations, were extensively used. The most frequent binomials were 'مدح والذم' 'praise and dispraise', 'الخوف والتحسب' 'fear and alert', 'العلم والمعرفة' 'science and knowledge', 'الحسد والغيرة' 'jealousy and envy', 'المتعصبين والمطرفين' 'extremists and fanatics', 'العقل والمنطق' 'mind and logic', 'الشعب والأمة' 'people and nations', 'بلدي وحزبي' 'my country or political party', 'الحب والتسامح' 'love and forgiveness'. The collocations mostly used were 'جندي ومخلص' 'honest soldier', 'الاستخبارات العسكرية' 'security police', 'أنفذ نفسي' 'save myself', 'الأجهزة الأمنية' 'military intelligence', 'جمال الحق' 'beauty of right', 'جمال الإيمان' 'beauty of faith', 'جمال العدالة' 'great leadership of Iraq', 'جمال العدالة' 'beauty of justice', 'القيادة العظيمة للعراق'.
- (v) The expressions that were mentioned more than once were 'لقد كنت دوماً مخلصاً لبلدي' 'I have been loyal to my country and believe in my nation', 'لم أحمل لا أحب' 'I have never experience hatred or despised anybody', 'مؤمناً بأمتي' 'I dislike fanatics and extremists', 'مولع بالقراءة والحصول على' 'I am fond of reading and getting information on everything', 'لم أفكر يوماً في إن الحق الأذى لبلدي أو حزبي' 'I have never thought of causing harm to my country or my party', 'لقد أمضيت طيلة خدمتي في الجيش بمنتهى الشرف والأمانة والإخلاص' 'I have spent all my military service in utmost honor, loyalty, perseverance, and honesty'. These expressions clearly reflect the worries, fears

and agonies, which can be viewed as a prelude to deep depression and despair that might lead to unpredictable actions.

Regarding content, Text B can be divided into three parts.

In part one, the author reported that he felt he had been watched by military intelligence and security police for some reason which he did not know and which might have been due to slander or defamation.

The second part is a detailed description of S.'s relationship with his colleagues and students in the Military College and how his students admired him whereas some of his colleagues felt envious and jealous of S. ascribing to him expressions and ideas which he had never endorsed. This might have made the military intelligence suspect him.

Part three is a detailed advice to his sons urging them to follow his path in educating themselves in science, literature and the arts; to appreciate knowledge and beauty; to respect man and his dignity; and to do everything possible to benefit people and their country. S. concluded that he was neither the first nor the last one to be the victim of knowledge in an uneducated environment.

The form and content of Text B (the known text) were compared with Text A (the disputed text), concluding with the following major findings:

- (i) In both texts, the sentences were very long. The average number of words per sentence was roughly the same: thirty nine (39) words per sentence in Text A and forty one (41) words per sentence in Text B.
- (ii) The most frequently used words in both texts were roughly the same: haunted, being watched, 'أشعر' feel, 'شعور' feeling, 'شك' suspicion, 'الشرطة' police, 'المخابرات' intelligence, 'محبط' disappointed, 'ضحية' victim, 'مخلص' faithful, 'صادق' honest, 'بري' innocent, 'حسود' jealous, 'غيور' envious.
- (iii) Both texts contained a lot of words in combination, especially binomials and collocations. The following binomials were found in both texts: 'كبد وجهد' diligent and hardworking, 'حب وتسامح' love and indulgence, 'حسد وغيره' jealousy and envy, 'فشل وخيبة أمل' failure and disappointment, 'شك وريبة' doubt and suspicion, 'شهادة وصدق' nobility and honesty. The collocations found in both texts were: 'جندي أمين' honest soldier, 'أجهزة الأمن' security police, 'الاستخبارات العسكرية' military intelligence, 'أدنى شك' little doubt, 'الصدق' absolute honesty, 'خوف و يقظة' fear and alert.
- (iv) The second paragraph in both texts started with the following: Text A 'لقد بدأت' "I started feeling since I was transformed from Fidaayiu Saddam that I was being watched by the security police" Text B 'بدأت اشعر مؤخرا في هذه الفترة بانني مراقب من قبل المخابرات والاستخبارات العسكرية' "I started feeling, recently, that I was being watched by military intelligence". Longer expressions found in both texts were: 'لم أفكر أي لحظة ان الحق' "never thought of causing harm to my country or my party", 'الصرر ببلدي وحزبي' "spent all my military service in utmost honor and loyalty", 'لم اعرف الحقد والكراهة على احد' "never experienced hatred or despise to everybody" and 'انقلبت وبالأعلى' "turned adversely against me". Expressions that imply exaggeration, were also abundant in both texts such as 'واثق أقصى' "without any doubt", 'بدون أدنى شك', 'الغالبية العظمى' "the great majority",

- ‘very, very few’, ‘قليلة جدا جدا’, ‘very, very large’, ‘كبيرة جدا جدا’, ‘deadly sure’, ‘درجات الثقة very few’, ‘في أية لحظة’, ‘at any moment’, ‘very serious’, ‘حريص جدا’.
- (v) The cohesive devices common in both texts were: ‘and’ and ‘or’. ‘Or’ was usually used to combine nouns or adjectives; ‘and’ was mostly used to combine two or more nouns, adjectives or verbs. In two cases only was „and” used to combine paragraphs. Other cohesive elements used in both texts were concessive: “especially”, ‘رغم’, ‘although’ followed by the correlative ‘especially’ and ‘not only but also’.
- (vi) The cohesive ties in both texts were mostly immediate, i.e., the cohesive device immediately refers to its presupposition or antecedent anaphorically or cataphorically except for one item in Text A. In Sentence 1, the word مكروه (inconvenience) cataphorically referred to the act, i.e., suicide in Sentence 11.
- (vii) Lexical cohesion was the most prominent types of cohesion in both texts. Synonymy, near synonymy and antonymy were extensively used, for example ‘شرف وأمانة’ ‘honour and honesty’, ‘الإخلاص والمثابرة’ ‘loyalty and perseverance’, ‘تعب’ ‘toil’, ‘معاناة’ ‘agony’, ‘فقر’ ‘poverty’, ‘كدح جهد كلل’ ‘diligence and exertion’, ‘مقت وكرهية’ ‘hatred and abhorrence’, ‘مخلص للوطن مؤمناً بأمنه’ ‘and loyal to country trust in his nation’.
- (viii) Although the two texts differ in content, Text A being a suicide note while Text B being a letter of advice, it seems that text B might be considered as a prelude to text A. As mentioned earlier, Text B contained a lot of words and expressions that were also found in Text A, a case which indicates that the author was in roughly the same psychological state.
- (ix) As far as coherence is concerned, both texts are coherent. In Text A, the topic sentence is in the second sentence of the first paragraph. The idea that „I was going to meet Allah” is developed by giving background knowledge on what S. was feeling recently and that he suspected being watched by security police. In the second paragraph, the author swears that he is innocent and never thought of causing harm to the country, the political party, or the military leadership. The third paragraph reports the author’s feelings of failure and disappointment ascribing these feelings to bad fate and luck. Paragraphs four, five and six are a sort of praise showing love, high respect and dignity to president Saddam Hussein and his son Uday asking them to look after S.’s wife and children with kindness and affection. The last paragraph was written after the signature. This implies that it was added later, shortly, perhaps a few minutes, before the accident. In this paragraph, the deceased clearly states the reason behind committing the act of suicide ‘وذلك لأنني اعرف حجم التعذيب الذي سأعرض له من اجل الاعتراف’ ‘this is because I know the amount of torture I am going to be subject to in order to confess’.

Text B is also as coherent and to -the-point as Text A. However, there are a lot of repetitions, digressions, and reiterations in Text B. The topic sentence is introduced in the first paragraph ‘اكتب هذه الوصية إلى أبنائي’ ‘I am writing this word of advice to my sons’ indicating that S. was feeling something inconvenient to happen shortly. Paragraph two develops the topic sentence. The controlling idea is that S. was being watched by the military intelligence for reasons unknown to him. Paragraph three is a very long one.

Here, the author relates his relationships with his colleagues and students in the Military College, repeating that the security police and intelligence were watching him but he did not care and had nothing to be afraid of. The controlling idea in paragraph three is that he was spending most of his time reading and increasing his knowledge. In the last and longest paragraph, the author unfolds his advice to his sons. The main point of his advice is summarized in the following: ‘وصييتي لأبنائي تتمحور حول حثهم على طلب المعرفة والاستزادة منا ‘ ‘My advice to my sons revolved around urging them to seek knowledge and increase it because it is the best way to serve country and nation’ although he also stated that he was neither the first nor the last to be the victim of knowledge.

- (i) Finally, an error analysis was made for both texts. The aim was to see whether the types of errors in both texts were similar. One difference found in Text B is a spelling mistake ‘ومضيت ‘ instead of ‘وأمضيت ‘ (passed); and there is also a grammatical mistake ‘فرضته عليّ المعرفة ‘ instead of ‘فرضته عليّ المعرفة ‘ (while the knowledge dictates upon me). In contrast, eleven punctuation errors, especially using commas instead of periods, were found along with some lexical errors, for example ‘شوطاً بعيداً ‘ instead of ‘شوطاً بعيداً ‘ (too far), and ‘تتمحور حول ‘ instead of ‘وانني جهودي ‘ (involves). In Text A, three spelling mistakes were found: ‘وانني جهودي ‘ instead of ‘وان جهودي ‘ (my efforts), ‘منذ تعرفت ‘ instead of ‘منذ عرفت ‘ (since I have known) and ‘انه لم يكن لي ‘ instead of ‘إنني لم يكن لي ‘ (I did not have) but no lexical or grammatical errors. There are, however, eight punctuation errors, especially replacing periods with commas. This type of error in Arabic is not as serious as it is in English, and it is frequently overlooked, unlike grammatical or stylistic errors. No scrapes or cancellations were found in either texts. This implies that the writing of both texts was preplanned and done with great care.

7. Conclusion

The present study aimed at applying methods and techniques of applied linguistics in analyzing a suicide note left near a brigadier who was found shot in the head. The purpose was to provide research-based linguistic evidence to support the victim's family's claim that the accident was an assassination disguised as suicide and that the note found near S. was either a mere fabrication or was written by the deceased under duress or threat. The suicide note was carefully analysed linguistically and then compared to a text known to have been written by the deceased to see whether the two texts can be attributed to the same author. The result of the analysis and comparison indicate the following.

- (i) In both the disputed and the known texts the sentences were very long and the number of words per sentence was almost the same; binomials and collocations were extensively used; similar expressions having roughly the same emotional meaning were found; the cohesive devices, cohesive ties as well as the type of cohesion were almost the same; the way the topics were introduced, developed and concluded were similar; and the number of errors and mistakes were very few

and similar, especially the punctuation errors. From these results one may safely conclude that both texts can be attributed to the same author. This means that the suicide note was genuine, i.e., written by the deceased.

- (ii) The linguistic analysis of the form and content of the suicide note showed that the text was highly cohesive and coherent. This implies that the suicide note had not been tampered with either wholly or partially.
- (iii) The suicide note was carefully written with no scrape, erasing or cancellation and with very few mistakes. This indicates that the author had probably written the notes few days before the accident and the last paragraph might have been added shortly before the accident. It also indicates that the note was not written under threat or duress as the family of the deceased assumed. The linguistic evidence found supplements the external and interpretive evidences in shedding light on the nature of the accident and in verifying the claims that the accident was not an assassination but a suicidal act. Yet the final decision is to be left to the discretion of the judge to whom the case will be submitted.

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