

# Using stylistics in forensic authorship attribution/identification

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Given my background as a public prosecutor as well as a linguist and stylistician, I am aware of the growing importance of linguistic analyses providing evidentiary support in criminal (and civil) court cases. This paper with an exclusive focus on crime combines a linguistic perspective with requirements forensic linguists face when providing evidence either during an ongoing investigation or as expert witnesses in court.

My topic is linguistic authorship identification and for the purpose of demonstration I use an anonymous threat letter (referred to as „text“ from here on) that I found on the internet. According to information accompanying this letter, it was delivered to the mayor of a German town, Neu-Isenburg, on 9th March 2016 and is thus a contemporary text. This allows me to neglect aspects of language change over time.

Before I present selected findings from analysing the text, I first provide the text with its sentences numbered for reference purposes, followed by my own translation of the text into English:

(1) ACHTUNG

(2) Dies ist eine Warnung an die CDU, SPD, die Grünen und die Linken im Stadtparlament.

(3) Hört auf damit Euch so stark für Muslime in Neu-Isenburg einzusetzen.

(4) Der Löwenanteil dieser Menschen ist Aggressiv und Böse und sie möchten hier nur ihre scheiß Religion durchsetzen.

(5) Wir sind eine Gruppe Christen beider Deutschen Konfessionen und wir haben die Schnauze voll uns anfeinden, defarmieren und beleidigen zu lassen.

(6) Wir haben es auch satt das wir ständig gesagt bekommen das der Islam die einzig wahre Religion wäre, obwohl wir alle wissen das diese Religion der letzte Dreck ist.

- (7) Die deutschen Kinder gehen in den Schulen durch die Hölle und unsere Politiker tun nichts dagegen.
- (8) Damit ist jetzt Schluss.
- (9) Wir sind bewaffnet und bereit.
- (10) Hört auf damit euch so stark für Muslime zu engagieren, andernfalls beginnen wir mit Erschießungen bei Angehörigen dieser Volksgruppe.
- (11) Wir machen keinen Spaß uns [ist]<sup>1</sup> mittlerweile die Lust am Leben in diesem Land vergangen.
- (12) Finden unsere Forderungen trotzdem kein Gehör so werden wir mit Erschießungen von Kommunalpolitikern weiter machen.
- (13) Wir lassen uns nicht Islamisieren.
- (14) Wir sind Christen und verteidigen unser Land.
- (15) Achtung dies ist eine Warnung

Translation:

- (1) Attention
- (2) This is a warning to CDU (Christian Democratic Party), SPD (Socialist Party Germany), Green Party and Left Party in town parliament.
- (3) Stop campaigning so much for Muslims in Neu-Isenburg.
- (4) The lion's share of those people is aggressive and evil and they only want to enforce their shit Religion here.
- (5) We are a group of Christians from both confessions and we are fed up with being treated with hostility, defamed and insulted.
- (6) We are also fed up with being lectured that Islam were the only true religion although we all know that that religion is the scum of the earth.
- (7) German children go through hell in schools and politicians do nothing against it.
- (8) That's enough now.
- (9) We are armed and ready.
- (10) Stop campaigning for Muslims so much otherwise we will begin to execute members of this ethnic group.
- (11) We are not joking, we have meanwhile lost our lust for life in this country.
- (12) In case our demands go unheard we will continue with executing local politicians.
- (13) We do not allow being islamised.
- (14) We are Christians and we defend our country.
- (15) Attention, this is a warning.

At first glance, a reader knowing German can easily identify a whole bunch of orthographic, grammatical and punctuation mistakes in the German text which do not show in the English translation because I do not wish to focus

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<sup>1</sup> The verb is missing in the original, I added a possible verb choice to enable a better understanding of the sentence.

Das Verb fehlt im Original, ich habe ein mögliches Verb zum besseren Textverständnis eingefügt.  
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on them here in this short summary. Forensic linguists, I wish to add, distinguish between „errors“ and „mistakes“, the latter are made unconsciously and could be potentially corrected by the author whereas „errors“ are based on wrong or non-existent knowledge of rules (Corder 1967, pp. 161-70). It would, however, be considered a shortcoming of any forensic linguistic analysis if it were limited to errors and mistakes. Instead, the forensic linguist might want to discuss if these could have been consciously placed to disguise idiolectic patterns although people are generally ,unable to reflect on their own writing style and change it in a way that [makes] it fundamentally different from their other writings‘ (Marko 2018, p. 220).

Idiolect, to present a definition, is „not merely what a speaker says at one time: it is everything that he *could* say in a given language“ (Bloch 1948, p. 7). Idiolect manifests itself through „distinctive and idiosyncratic choices in speech and writing“ (Coulthard, Johnson & Wright 2017, p. 15). Errors and mistakes, if not consciously placed, are undoubtedly a partial aspect of a person’s idiolect but idiolect is by no means limited to them. For reasons of brevity I leave these aside and focus instead on not so easily detectable idiolectic patterns. The more idiolectic patterns can be identified, the more accurate authorship identification becomes. The shorter the text, however, the less idiolectic features show as a rule which is one of the major problems forensic linguists face. The text analysed in this paper consists of 184 words and thus offers enough material for analysis.

A forensic linguist needs to be aware that linguistics is not an exact science and does not deliver statistical probability values like, for example, a comparative molecular genetic analysis of DNA-containing material (e.g. semen) and a blood sample from a suspect. In such cases, experts usually claim that it is x-million times more probable this semen stems from this suspect than from another person. Results from linguistic authorship attribution (when there are texts to compare the target text with) are presented on a scale of probabilities reaching from highly (un)likely to *non liquet* and therefore do not provide similar percentages of certainty as DNA tests do (Drommel 2016, p. 25). Judges and lawyers, however, are used to work with such high probability values about a given hypothesis and are thus rightfully cautious to base their decisions upon linguistic expert statements alone. It thus follows that linguistic evidence on its own cannot be regarded a sufficient basis for decision making but needs to be backed up by, for example, witness statements and other evidence. During the investigative stage, however, it can yield important information about a yet unknown suspect.

Out of the results from linguistically analysing this threat letter (which are presented in more detail in the German version of this paper) I wish to

present two points: metaphors and, on the other hand, modality, subjunctive and logic.

## 1. Metaphors

An analysis of metaphors used in the threat letter reveals two main source domains (Lakoff & Johnson 2003): The first is that external processes or events in society are understood in relation to the human body or body feelings and the second group have animal-related source domains.

From the first group I begin with the following example because the theme of being fed up (satt haben) re-occurs in the text:

Wir haben es auch satt ... (Sentence 6)

(We are also fed up ...)

Metaphor: ÜBERDRUSS IST SÄTTIGUNG (WEARINESS IS REPLETION)

I wish to point out that „satt haben“ (being fed up) is a dead metaphor as the body feeling of a filled stomach after a meal is also generally understood in relation to a mental feeling, depending on context. The author in this case is „fed up“ with repeated and enduring („ständig“) lectures on Islam being „the only true religion“ which is not only perceived as being too much but also to be erroneous. The reason why this is wrong appears to be the author's perception of Christianity as (another) „true religion“ in the first clause together with an anaphoric reference to Sentence 5 (a group of Christians from both confessions). This conclusion can be reached because the pre-determiners of the head noun „religion“ in the noun phrase „the only true religion“ in Sentence 6 presuppose (Levinson 1983, p. 181ff) that there is more than one „religion“ or even one „true religion“. However, the second clause in Sentence 6 presents a concessive opposition (Davies 2013, p. 61) to the assertion in the first clause. Said oppositional meaning is triggered by the conjunction „although“ (obwohl). Sentence 6 thus presents an opposition between Islam being one „true religion“ versus it being „the scum of the earth“ and thus mitigates if not even retracts the assertion made in the first clause. The thus constructed inferiority of Islam compared to Christianity reveals a dichotomous if not even mutually exclusive perception of these two religions according to the author's worldview.

What is more is that the group the author apparently belongs to has members from both confessions (Protestants and Catholics). This is remarkable insofar as there has been a historic divide between both major Christian denominations since Martin Luther had published his 95 theses in Wittenberg in 1517, the starting point of the Reformation. The fact that Protestants and Catholics unite in the author's group for purposes laid out in the text underlines the severity of the threat posed by Muslims and Islam as perceived by the author of the threat letter.

The second point the author is „fed up“ with are insults (Sentence 5) the reason for which the author sees in the religion these people follow instead of considering other, for example personal, reasons or simply misconduct. The culprits of these insults (Sentence 5) and the providers of lectures on Islam (Sentence 6) are both „Muslims in Neu-Isenburg“ (Sentence 3) although the anaphoric reference is a bit difficult to figure out for the reader but apparently not for the writer.

Beside the dead metaphor of being „fed up“ we find others that also use the concept of the human body as source domain:

Sentence	Metaphorically used phrase	Translation	Metaphor	Translation
3	so stark einsetzen	to campaign, inset	POLITISCHES BEHAUPTEN IS KÖRPERLICHER EINSATZ/HANDELN	POLITICAL ENFORCEMENT IS BODILY ACTION
4	durchsetzen	to enforce, to sit	IDILOGISCHE VORHERRSCHAFT IST KÖRPERLICHER EINSATZ/ KÖRPERLICHES HANDELN	IDEOLOGICAL SUPREMACY IS BODILY ENFORCEMENT
7	durch die Hölle gehen	to go through hell	UNANGENEHMES DURCHLEBEN IST FORTBEWEGUNG	TO EXPERIENCE UNPLEASANT TIMES IS MOVEMENT
11	Lust am Leben vergangen	to lose one's lust for life	LEBEN IST LUSTEMPFFINDEN	LIFE IS LUST
12	Gehör finden	to find an ear	BEACHTEN IST WAHRNEHMEN	HEARING IS PERCEIVING

Table 1: Human body as source domain

All these metaphorical expressions relate to the human body or human body feelings and are not particularly innovative in German as they are more or less lexicalised.

Animal-related metaphors are the following:

Sentence	Metaphorically used phrase	Translation	Metaphor	Translation
5	Schnauze voll haben	to be fed up to the back teeth (Schnauze = animal jaw)	ÜBERDRUSS IST SÄTTIGUNG	WEARINESS IS REPLETION
4	Löwenanteil	lion's share	SOZIALER RANG IST GRÖSSE	SOCIAL RANK IS SIZE/AMOUNT

Table 2: Animals as source domain

I particularly find the use of the noun „Löwenanteil“ (lion's share) in Sentence 4 noteworthy as it describes animate objects and is thus used in an unusual way, at least in German. The entire sentence 4 reads:

Der Löwenanteil dieser Menschen ist Aggressiv und Böse und sie möchten hier nur ihre scheiß Religion durchsetzen.

(The lion's share of these people is aggressive and evil and they only want to establish/enforce their shit religion here [in Germany].)

Here, „lion's share“ is used to quantitatively describe the noun „people“, people being a reference to „Muslims in Neu-Isenburg“ from the previous Sentence 3. In German, the compound noun „Löwenanteil“ (lion's share) is normally used in connection with inanimate objects or rather abstract terms, e.g. lion's share of work, profit, power (Baldinger 1993, p. 6). By using „lion's share“ to further describe „people“, its use deviates from expectations following the aforementioned rule and is thus lexically foregrounded. This together with the use of capital letters in the beginning of the adjectives „Aggressiv“ and „Böse“ in the same sentence underlines the author's feeling of being threatened by „Muslims in Neu-Isenburg“. The example further demonstrates that deviations from a norm, namely that adjectives normally begin with small letters unless in the beginning of a sentence, do not necessarily point towards competence deficits but can sometimes be stylistic means of expression (used consciously or subconsciously) and are rather to be considered a facet of idiolect.

## 2. Modality, Subjunctive and Speech presentation

Another finding from my analysis is that the text contains several instances of modalised assertions. For the purpose of this short summary of my analysis I focus on one sentence in particular as it is the longest sentence in the text (29 words compared to an average of 13 words per sentence) and contains two instances of epistemic modality:

Wir haben es auch satt das wir ständig gesagt bekommen das der Islam die einzig wahre Religion wäre, obwohl wir alle wissen das diese Religion der letzte Dreck ist. (Sentence 6)

(We are also fed up with being told that Islam were the only true religion whereas we all know that that religion is the scum of the earth.)

Here, the author quotes others with the exact source remaining unknown but most probably „Muslims in Neu-Isenburg“ from Sentence 3. For argument's sake let us presume their original words were, „Islam is the only true religion“. In German, there are two options to quote this phrase using present subjunctive I or past subjunctive II (Konjunktiv I or II). When

translated, the difference between the two can be best demonstrated by comparing the following two translations:

Konjunktiv I: ... that Islam was the only true religion ...

Konjunktiv II: ... that Islam were the only true religion ...

By using Konjunktiv II, the author is able to express greater doubt about the veracity of the assertion in comparison to Konjunktiv I. What is noteworthy about this sentence in relation to idiolect is that the author flawlessly manages such rather difficult grammatical construction in German whereas I mentioned earlier a whole bunch of spelling or punctuation mistakes in the German original. This supports the necessity for the forensic linguist to discuss whether the correct use of Konjunktiv II is just a „lucky guess“ or an example that the author was unable to hide his advanced language competence (an idiolectic feature) completely.

An argument in support of the author's advanced language competence is again to be found in Sentence 6: a multilayered opposition between „einzig wahre Religion“ (only true religion) and „letzte Dreck“ (scum of the earth, last trash). Oppositional meaning is triggered by a parallel syntactic structure. In order to achieve such parallelism it would have sufficed to repeat ‚Islam‘ in a sentence like

... that Islam were the only true religion ...

whereas we all know that Islam is the scum of the earth.

Instead, the noun „religion“ is used to replace the noun „Islam“ and gets repeated in this sentence. Sentence 6 reminds me of deductive logic in the tradition of Aristotle where a conclusion follows from two given premises like in the following example taken from McIntyre (2005, p. 26):

Premise 1: All teachers are lazy

Premise 2: Dan is a teacher.

Conclusion: Dan is lazy.

Applied to Sentence 6 this means:

Premise 1: Islam is (the only true) religion

Premise 2: that religion is the scum of the earth

Conclusion: Islam is the scum of the earth

Such deductive logic in Sentence 6 might indicate at least an awareness of the rhetorical rules of logic and argumentation which is used to persuade the addressee and thus to support the illocutionary force behind the utterance.

To bring this short summary of my analysis to a close I wish to emphasise again the creative use of the metaphorical expression „lion’s share“ as well as the correct use of a subjunctive construction (Konjunktiv II) in combination with rhetorical persuasion. These facts prove a higher language competence than initially indicated by the spelling and punctuation mistakes. Please note that these mistakes do not show when the text is read out aloud (apart from the missing verb form in Sentence 11). I therefore argue that a forensic linguistic analysis needs to look behind surface structures and expose deeper seated language structures in order to provide a comprehensive idiolectal profile.

### References:

Baldinger, Kurt (1993). Ist die unsichtbare Hand wirklich unsichtbar? Kritische Betrachtungen zum Bedeutungswandel. In: Schmidt-Radefeldt, Jürgen & Harder, Andreas (1993). *Sprachwandel und Sprachgeschichte: Festschrift für Helmut Lüdtke zum 65. Geburtstag*. Gunter Narr Verlag, Tübingen.

Bloch, Bernard (1948). A set of postulates for phonemic analysis. *Language*, 24(1). pp. 3-46.

Corder, Stephen P. (1967). The significance of learner’s errors. *International Review of Applied Linguistics*. V(4). pp. 161-170.

Coulthard, Malcom; Johnson, Alison & Wright, David (2017). *An Introduction to Forensic Linguistics: Language in Evidence*. 2nd ed. Routledge, Abingdon/New York.

Davies, Matt (2013). *Oppositions and ideology in news discourse*. Bloomsbury, London.

Drommel, Raimund (2016). *Sprachprofiling - Grundlagen und Fallanalysen zur Forensischen Linguistik*. Frank & Timme, Berlin.

Lakoff, George & Johnson, Mark (2003). *Metaphors we live by*. The University of Chicago Press, Chicago.

Levinson, Stephen C. (1983). *Pragmatics*. Cambridge University Press, Cambridge.

Marko, Karoline (2018). Underlying motivations for the use of linguistic disguise in written English and German threats and ransom demands in an experimental corpus. *Nordic Journal of Linguistics*. 41(2). pp. 205-26.

McIntyre, Dan (2005). Logic, reality and mind style in Alan Bennett’s *The Lady in the Van*. *Journal of Literary Semantics*. 34. pp. 21-40.