Forensic Linguistics accredited:
Four years of experiences with ISO 17020 in authorship analysis

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Abstract. *In 2009, the report of the US National Academy of Sciences was published by which the unsatisfactory situation in forensic sciences was impressively revealed. One major issue was how the work of forensic experts can be improved, standardised and kept monitored in order to prevent incorrect results and conduct. In this context, the Forensic Science Institute of the German Bundeskriminalamt decided in favour of an accreditation. A comprehensive quality management system has been implemented and the linguistics department works according to the norm ISO 17020 since more than four years now. This had certainly many positive effects for standardisation, transparency and credibility. But of course an accreditation is not the panacea for all the inadequacies that may prevail in forensic sciences.*

This paper focuses on how quality management was implemented in forensic linguistics, which ethical issues it addresses, how it affects scientific work routines and which improvements for case work can realistically be expected of an accreditation. A second focus will be on the problems that disciplines like forensic linguistics face when they strive for accreditation or other forms of quality assurance and professionalising practice. The results of a survey among forensic linguistics experts with a business or university background will be used to complement the experiences made with a quality management system in law enforcement.

Keywords: Forensic linguistics, authorship analysis, quality assurance, accreditation, ISO 17020.

Introduction

The report of the National Academy of Sciences (NAS report) has shown that the US forensic sciences community is fragmented and reflects unfavourable heterogeneity. As

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well, it is characterised by a lack of standards and resources (NAS report: Committee on Identifying the Needs of the Forensic Sciences Community / Committee on Applied and Theoretical Statistics / National Research Council, 2009: 2-17). However the state of forensic science in other parts of the world may be, quality management is one of the major issues in this context, especially for a discipline like forensic linguistics, which is only partly established in the sense that it is not an inherent part of laboratories or forensic science institutes, and that it lacks best practices as well as standards for education and training.

The situation of forensic linguistics differs internationally, largely due to differences in judicial systems and judicial decisions concerning the admittance of linguistic evidence in court. Accordingly, the working conditions for forensic linguists may differ substantially, although similarities are most likely to be found with respect to linguists working in the academia. In Germany, the majority of forensic linguistics experts presumably belong to this group. To the author's knowledge, experts with a university background apply their science to case work just as a sideline job. In contrast, full-time practitioners are small in number. Some of them work in law enforcement since Germany is one of the few countries to have forensic linguistics expertise included into the scope of services offered by the Forensic Science Institute of the Bundeskriminalamt (BKA)[1]. Very few German experts of forensic linguistics are employed in consulting firms. As far as is known, there are just a handful of private enterprises to be in this line of business and, for at least one of these, the focus rather seems to be on handwriting analysis with forensic linguistics only to complement it.

From the perspective of clients in need of forensic linguistics expertise, it might be hard to find experts whose credentials can be easily evaluated. For one reason, Germany lacks a national board for representation and developing methods and standards in forensic linguistics. For another reason, linguistic experts are only seldom listed in registers, e.g. professional registers that a national board or association of forensic linguistics may be in charge of or official registers like local commercial directories or the Main Chamber of Commerce and Industry.

In general, the situation of fragmentation and heterogeneity as the NAS report described it can be observed in German forensic linguistics as well. It calls for different measures to overcome the current situation, particularly addressing issues like consistency, reliability of results, comparability as well as integrity of conduct. Terms that are frequently and sometimes inaccurately used in this context are *quality management, quality assurance, standardisation, best practice, code of ethics, accreditation* and *certification*. The expression 'quality management' was usually employed to describe processes in the business sector but now it is generically used in all kinds of sectors offering products and services to clients. It incorporates different principles of management like the customer focus and the continual improvement process. The term 'quality management' does not necessarily refer to efforts oriented towards good quality. Instead the focus is put on consistent quality. There are several components making up a quality management system with quality assurance being one of them. (The others are quality policy, objectives, planning, control and improvement according to DIN EN ISO 9000:2005 (2005: 21).) Quality assurance comprises the systematic activities to fulfil requirements concerning a predefined quality of a product or service.

Consistency as the main objective of quality management is tackled by standardisation, which refers to processes of developing and implementing standards, i.e. finding "best" solutions to specific problems and applying those methods consistently. Standards can be differentiated according to the degree of obligation ranging from voluntary standards up to legally binding (de jure) standards.

Besides ensuring consistency by standardisation, a further component of quality management is the improvement of the overall performance. Central to improvement processes is the concept of 'best practice', which refers to methods that have proved to produce superior results and that are used as benchmarks compared to other methods and procedures.

In order to confirm specific characteristics of their products and services, an organisation may choose a process of certification. This confirmation is organised to fit predefined standards like those of the International Organisation of Standardisation (i.e. certification according to ISO 9000) and it is provided by an external and official accreditation body which uses monitoring instruments such as audits, surveillances and re-accreditations to regularly inspect the adherence to the chosen standard. Thus, certification can be defined as a formal, external confirmation about the existence of an operating quality management system. An accreditation goes beyond certification in so far as it also comprises the confirmation that the organisation in question has the competence to provide the offered services or products.

In contrast to accreditation as an official form of managing quality, a code of ethics has a different status. Codes of ethics comprise a set of values and recommendations for members of an organisation or a profession. These values are the result of internal quality-managing efforts and can be considered as voluntary self-restrain rather than external regulations, although both forms may not differ much with respect to the degree of obligation that is put on the members of the organisation or profession in question[2].

For this paper, the expressions 'quality management' and 'standardisation' will be particularly relevant as these concepts play a central role in the first part, i.e. the description of the implementation of a quality management system covering the work of forensic linguists. The expressions 'best practice' and 'code of ethics' will be more important in the second and particularly in the third part, i.e. the discussion about the effects of a quality management system in forensic linguistics as part of a law enforcement authority and in the following evaluation of a survey among linguists who are working as experts under different conditions.

Accreditation and the ethical issues that are addressed

The BKA's decision to strive for an accreditation was made in 2003 on the basis of many and diverse causes[3]. The need to assure quality of results in sensitive areas like forensic sciences was generally recognised many years ago, and in accordance with this attitude there are recommendations by international organisations like the European Network of Forensic Science Institutes (ENFSI) and mandatory requirements by political institutions like the EU council. Within the field of forensic science, cases have become known in which the contribution of forensic science institutes was declined in matters of letters rogatory in international judicial proceedings[4] as well as in matters of EU programmes[5]. In both instances, the reason for declining cooperation was the participating institutes'

lack of an accredited quality management system and consequently their failure to prove that their work adheres to international standards.

In recent years, the need for forensic institutes to get accredited has become even stronger. The EU council reached a decision which states "the need to establish common standards for forensic service providers" and mandatorily requires international standards such as ISO 17025 (2005), at least for laboratories making DNA profiles and dactyloscopic data available (Council of the European Union, 2009). The EU council also published their vision of European Forensic Science 2020 (Council of the European Union, 2011). It involves the further development of forensic science infrastructure in Europe and the ensuring of a consistent administration of justice, e.g. by accrediting forensic science institutes and laboratories, establishing common best practice manuals, and conducting proficiency testing as well as collaborative exercises (Council vision for European Forensic Sciences 2020, 13/14 December 2011). ENFSI has set the standard that its member laboratories shall have accredited at least 50% of their fields of expertise where on average twelve examinations per year are performed (European Network of Forensic Sciences Institutes, 2011).

The decision to strive for an accreditation naturally implies the decision according to which norm a forensic discipline is accredited. A frequent choice for forensic laboratories is the norm ISO 17025. However, forensic linguistics as a strongly experience-based science requires additional considerations because any form of quality assurance has to comprise not just the process of producing scientific results but also the appropriate interpretation of those results. A work process that consists of both the examination of materials and the professional judgement of this examination's results is called *inspection* in the terminology of international standards. In contrast to the norm ISO 17025 which refers only to the examination process, the norm ISO 17020 also covers the "exercise of professional judgement" (2012: 7), i.e. the actual work of experts to assess, judge and interpret facts:

> This international standard covers the activities of inspection bodies whose work can include the examination of materials [...], and the determination of their conformity with requirements and the subsequent reporting of these activities to clients and, when required, to authorities. [...] Such work normally requires the exercise of professional judgement in performing inspection. (DIN EN ISO/IEC 17020:2012, 2012: 7)

In this context, the main aim of the international standard ISO 17020 is stated as "promoting confidence in bodies performing inspections" (2012: 7). In order to reach this aim diverse criteria are set up concerning the competence of an institute, its impartiality and the consistency of its work (2012: 9). By this, major ethical issues in the work of a forensic expert seem to be addressed. The issue of *competence* is approached by both resource and structural requirements. Most importantly, resource requirements include the education and training of those who perform the inspections. Forensic experts and their co-workers are supposed to be employed according to their abilities (i.e. formal proof of qualifications and degrees) and they are supposed to be regularly trained in order to preserve and further their knowledge. Structural requirements cover aspects like management, workflow, equipment, and facilities.

Impartiality refers to the presence of objectivity and consequently the avoidance of conflicts of interest and (financial) pressures, e.g. by regulating the expert's remunera-

tion accordingly or setting transparent guidelines for sponsoring of research, equipment etc. Of course, the remuneration of an expert in dependence of the outcome of the case as it might occur especially in adversarial judicial systems presents a fundamental risk to impartiality and should thus be addressed by any form of quality assurance or a code of ethics as Stygall (2009: 264) and Ainsworth (2009: 281) point out. For linguistic experts working in German law enforcement, remuneration is regulated in accordance with public sector pay and, thus, independently from the outcomes of cases. But financial pressures or conflicts of interest may nevertheless arise, e.g. by invitations and free event tickets as forms of concealed sponsoring. These risks have to be made obvious and subsequently prevented by corresponding regulations.

In order to ensure *consistency*, the inspection methods are standardised by the so called standard operation procedures (SOP). Similarly, the handling of all items that are related to the tasks at hand is regulated by a retraceable chain of custody. Consistency is also concerned when it comes to faults and mistakes. An extensive complaints and appeals process is supposed to address these aspects. Of course, consistency is not meant to be an end in itself but rather intended to increase comparability of results and transparency of procedures in the interest of clients.

As the linguistics department at the BKA is embedded in the Forensic Science Institute it benefits from a standardised infrastructure covering the entire institute and referring to generalised aspects like the training of experts in legal and law enforcement matters, the financing of equipment or research projects and the extent of documentation. The actual linguistic work is standardised by standard operation procedures that were already mentioned above. Each kind of inspection is described separately with respect to its methodological basis and its purpose. For example, there are SOPs about the inspection forms Text Comparison, Text Analysis (categorisation of an author on the basis of hisher anonymous writing), Administration of the Text Corpus and Conducting Corpus Searches. SOPs may contain statements about the scope of application, responsibilities, information about the method, principle and actual realisation, about tools and aids, documentation, quality-assuring measures, references as well as the validation of the method in question. The setting up of such a standard operation procedure obliges its users to adhere to what was fixed as well as to regularly prove that each inspection produces the expected results. This is usually done by proficiency tests or (if practicable at all) by collaborative exercises which are just one kind of control mechanisms that a quality management system has to include[6].

Concerning consistency of work, the workflow of an inspection and the subsequent report about these activities are standardised. Thus, it is clearly regulated what happens when requests of clients (i.e. police, prosecution and the courts) are received and how these requests are to be handled. Most of all, records have to be kept to such an extent that all processes and procedures can be retraced and understood. Similarly the expert's report about the conducted analysis is meant to cover all aspects involved to understand the whole process and its results. Corresponding to this aim, the structure of reports was standardised as presented in Table 1.

Before reports are sent to clients, they have to pass several checks, e.g. a formal check by co-workers, an in-content check by a second expert (peer review) and a plausibility check by persons higher in rank than the expert him-/herself.

Table 1. Standardised structure of reports.

1. Request (quotation of the original request + rephrasing by the expert)
2. Unambiguous description of the items of inspection, i.e. the texts that are to be examined
3. Methodological outline as in the SOP (terminologically adapted for non-linguists if necessary)
4. Results of the examination
    (a) Critical inspection of the items for analysis: text quality + quantity + time of origin (if necessary) → assessment of suitability for the inspection at hand
    (b) Results for each text separately (as neutral representation of facts)
5. Discussion and interpretation of the examination results
6. Conclusion, i.e. essence of *5. Discussion*

Although this structure of expert reports appears quite rigid the overall objective of these guidelines is to ensure the comprehensibility of the analysis at hand. A report is written with the aim to help the court or the police, thus, it must be understandable both in its scientific content – particularly to those without linguistic training — and its line of argumentation, which means it has to reveal which linguistic findings lead the expert to draw hisher conclusions. Furthermore, the consistent structure of reports is supposed to support comparability between reports, especially with respect to the interpretation of results. Exaggerating interpretations of findings as well as inappropriate choice of methods and incomplete representations of examination results are meant to be prevented by these structural guidelines.

Accreditation and its effects

The standardisation concerning the general conditions of case work in forensic linguistics as described above has undoubtedly positive effects. The most important of these is the influence on consistency in the experts' work which is reflected in the comparability of results and the reports about the conducted analyses whose importance Ainsworth (2009: 287) already emphasised. Likewise, the issue of adequate documentation is dealt with because a quality management system according to ISO 17020 obliges to a clearly defined procedure of keeping exact records with the effects of ensuring a traceable chain of custody for all items involved in an inspection and making all aspects of the process comprehensible from beginning to end (also cf. Ainsworth (2009: 286)). Additionally, there are positive side effects like an improved customer service due to the speeding up of routine processes and enhanced possibilities to schedule requests for example.

Nevertheless, the scope of these positive effects is limited and there are ethical issues that cannot be directly addressed by an accreditation. Ethical issues in forensic sciences arise from diverse causes. Stygall names three possible sources: the nature of the legal system, the nature of the discipline of linguistics, and the nature of scientific research in any field (Stygall, 2009: 254). The German legal system is not an adversarial system and an expert might be less liable to become biased as a consequence of working

for one party or becoming member of the attorney's team in a fashion Finegan (2009: 274) describes. But of course, a system with an impartial and independent judge who is in complete charge of jurisdiction has its own characteristics that might cause ethical issues. Butters understandably puts up the questions "[H]ow do we assure that the expert is really neutral? Who is there to point out when the neutral expert is simply wrong?" (Butters, 2009: 241). Concerning the first question, an expert's opinion might be influenced by the connecting facts of the case. Then, it is up to the defence lawyer to 1) recognise that an analysis was not impartially conducted and 2) convince the judge of the fact that a second expert needs to be consulted — with both steps possibly presenting further issues. A quality management system at least provides the framework to operate under minimized risks to impartiality; although neutrality cannot absolutely be assured since it also depends on the attitude of a forensic expert. In addition to general regulations, supplements in form of a professional code of ethics are helpful here because they also address different aspects like the image that professional linguists feel necessary to transport of their science.

The second question Butters puts up is highly relevant because it refers to the ability of judges to assess the credentials of the experts they consult. Logically, it is problematic for someone who considers it necessary to request support of a specific forensic discipline to assess this support with respect to its realisation. But this is the task that a judge has to perform – on the one hand, realising the necessity of consulting a linguist to find answers to a linguistic problem and obliging a linguist to do just that, and on the other hand, evaluating linguistic matters as to whether or not this expert is applying the science correctly, with sufficiently great knowledge and in an up-to-date fashion. When in doubt, a German judge in criminal trials has the possibility to commission a decisive expert opinion.

Ethical issues concerning the nature of linguistics can be similarly hard to address directly by an accreditation and a quality management system. Most of all, the question about what quality actually is and how this relates to the problem of the "scientificnes" of linguistics is to be answered. In order to prove the reliability and validity of methods, proficiency testing and collaborative exercises are surely steps in the right direction. However, there are approaches in forensic linguistics, e.g. purely qualitative analyses, which can hardly be captured in terms of error rates. Furthermore, proper proficiency tests and collaborative exercises require a certain quantity of forensic linguists to take part. Considering the heterogeneity of tasks, subjects and working conditions in forensic linguistics, this quantity might not be reached in sufficient rates to have all methods regularly tested. In general, this fragmentation of linguistics as a forensic discipline and, consequently, an only limited number of colleagues (or otherwise cooperating practitioners) also implies the risk of self-referentiality. If only a handful of experts set standards, these standards might just be descriptions of what is already done anyway instead of developing standards to the benefit of the forensic discipline in general.

Ethical issues also arise from the nature of science. Again, there are issues that cannot be addressed directly by an accreditation according to an international standard like ISO 17020. The norm obliges to set up general conditions that ensure an expert's competence. These general conditions comprise regulations concerning additional training as well as formal proofs of competence in form of qualifications and academic degrees. However, these general conditions are only partly suitable to influence attitudes towards

aspects of competence. It still lies in the individual responsibility of an expert to assess the own limits of knowledge and experience with the consequence to decline requests when they require a competence beyond the own realms. Furthermore, there are issues of scientific standards to be considered which might run counter to what is most helpful for the participants of an investigation or trial. Surely, experts must not refrain from appropriately giving to understand the complexity of scientific analyses with their ambiguities and limits of interpretation of linguistic findings. Similarly, the language of reports has to be adequate and in adherence with scientific practice. Technical jargon is not to be avoided or even replaced by colloquial language. Instead, a combination of both linguistic terminology and "translations" for non-linguists should be sought. All in all, this refers to what Ainsworth clearly stated: "experts owe their professional allegiance to science, not to the lawyer and client in any particular case" (Ainsworth, 2009: 284).

To sum up these last paragraphs, the accreditation according to ISO 17020 can be discussed as to whether or not it implies the risk to focus solely on workflow and organisational aspects. Issues like competence, integrity and compliance with scientific practice are not easily to be covered. It appears that an accreditation should be complemented by a code of ethics set up by forensic linguistics practitioners themselves in order to prevent that quality assurance only provides a superficial frame for procedures that in fact do not adhere to either forensic or scientific standards.

Alternative quality-assuring measures in forensic linguistics

Naturally, an institutional quality management system differs from the quality-assuring measures taken by forensic linguistics experts as privately practising professionals. In order to complement the perspective of an accreditation in a forensic science institute a small survey was carried out. Its main focus is on alternative quality-assuring measures in forensic linguistics. The questionnaire was developed with the aim to supplement the description of experiences made during the accreditation process and is restricted to these aspects. The fragmented nature of the German forensic linguistics community resulted in a limited number of participants, nevertheless their background and their working conditions reflect the heterogeneity of the work of a forensic linguistics expert, as outlined in the introduction to this paper. In total, twelve experts have been asked to take part in the questionnaire. Six of them work in the academia as their main job, four of them work in diverse branches offering forensic linguistics expertise as a sideline job, and two of them have been chosen as representatives of consulting firms. Answers of eight experts representing each of the different professional backgrounds have been received[7].

The questionnaire consisted of nine questions that can be condensed to the following four quality assurance issues:

- *Attitude of experts towards quality assurance in forensic linguistics* (Do you see a need for action concerning quality assurance in forensic linguistics? Do you think that quality assurance can be somehow problematic in less well-established forensic disciplines like forensic linguistics? Is there anything you want to comment on, encourage or criticise with respect to the efforts of standardisation and quality assurance in forensic sciences in general?)
- *Attitude of police and courts towards quality assurance* (Have you ever been asked for quality-assuring measures by those who requested linguistic expertise from

> you? Have you ever been asked in court to prove that your work adheres to quality standards?)
> - *Approaches to quality assurance by the experts* (How do you make sure your work is of consistent quality? Are you accredited and why [not]? Are you linking up with other forensic linguistics experts to develop methods and measures of quality assurance respectively?)
> - *Standardisation of methods and its reflection in expert reports* (Concerning the linguistic methods that you use, do you adjust them according to the request you received? Do you integrate a methodological outline in your reports? Is this outline standardised or adjusted to the analyses at hand?)

The result of the survey is quite clear. Quality assurance is commonly considered to be of highest relevance. What is more, many participants of the survey urgently called for actions on both a national and an international level. They declared a definite need of at least minimum standards for methods, the appropriate evaluation of results as well as the writing of reports. Especially, the issue of inadequately compiled reports was often mentioned as the majority of experts seem to have come across reports of intolerable quality.

But the participants of the questionnaire also expressed different severe concerns. First of all, there is the concern that the possibilities for standardisation and quality assurance in forensic linguistics are limited due to the diversity of linguistic tasks that are presented to the experts by the courts and police. Furthermore, current methods of standardisation and quality management (according to international standards) are suspected to miss the point. Instead of addressing professional competence and an ethical attitude towards the work as a forensic expert, they are perceived as referring to superficial aspects of workflow and the organisation of general conditions and overemphasising consistent work routines. A further concern in connection with an accreditation is that quality management may be confined to those who can afford it as the implementing, running and sustaining of a quality management system ties up resources that individual experts simply do not command. In general, the benefits of an accreditation are recognised, but an accreditation is not seriously considered to be feasible for individually working experts.

Surprisingly, the attitude of the courts and the police towards quality assurance seems to be bordering on indifference. Only few experts declared that they are regularly asked to disclose their academic degrees. In these cases, an answer that mentions the M.A. or PhD in linguistics suffices (cf. Butters (2009: 239) who seems to have observed similar attitudes). It does not appear to be relevant either which subfield of linguistics an expert has specialised in or if this suits the analysis that has been conducted. Neither do judges try to determine whether the expert has finished additional training with respect to working in a forensic science context. Two experts said that they themselves usually point out their competence in the matter at hand.

In the questionnaire, the third complex of questions refers to what forensic linguistics experts actually do to tackle the problem of quality assurance. That this issue is in each expert's own responsibility is reflected by the heterogeneity of approaches. The quality-assuring measures listed by the participants of the survey include standardisation of workflow, methodological consistency, using of different methods to back up results, peer review, keeping oneself scientifically up-to-date, using linguistic theory as

basis of expert work, feedback of clients, appropriate time management, quality awareness, profundity, carefulness as well as relying on own publications and experiences. Most of these aspects were mentioned only once in the participating group of experts. Their variety suggests that quality assurance is not systematically approached and indeed regarded as a rather private matter. In this survey, exceptions were rare. For example, just one expert mentioned that he/she considers certification according to ISO 9000. Another expert pointed out that institutions like the Main Chamber of Commerce and Industry set up standards for regular training and insist on a proof of competence.

When it comes to standardisation of methods, the experts overall agree on its necessity. They usually have their own methodological outlines, which are supplemented by further explanations to suit the analysis at hand. However, in expert reports this issue is handled differently. Despite using a consistent methodological approach, some experts do not consider it necessary to convey it to their clients. In contrast, other experts strongly argue for an outline of methodology and the scientific grounding of the analysis that is conducted and documented in the report. Anyway, expert reports seem to be a disputed issue for the participants of the survey as many of them mentioned reports from colleagues that clearly did not adhere to what they themselves perceived as appropriate. The examples included inadequate presentation of results as well as inappropriate language marked by exaggerations and a frequent use of adverbs like "always" and "never" in the interpretation of linguistic findings.

Conclusion

The accreditation according to ISO 17020 has certainly many positive effects for the application of forensic linguistics to case work. The working conditions in a forensic science institute are suitable to implement, run and sustain a quality management system. Thus, the accreditation and its consequences on standardisation can surely be considered to be an appropriate measure to handle ethical issues of forensic sciences like those mentioned in the NAS report. However, the working conditions for the majority of forensic linguists are different from the working conditions in law enforcement. Independently and privately practising linguists cannot benefit from an already existing infrastructure; instead they have to tackle each aspect concerning their work themselves. This fact is reinforced by the fragmentation of the forensic linguistics community, which leads to fewer joint efforts and synergic effects than it could certainly be possible under circumstances of increased linking-up.

The contributions of the forensic linguistics experts who participated in the survey were very clear on the point that the development of standards for forensic linguistics is welcomed. Standards should address linguistic methodology as well as the attitude (including conduct) of forensic linguistics experts. The latter might be best approached by setting up a professional code of ethics, the former by developing best practice manuals of specific tasks that experts are frequently confronted with. It goes without saying that differences in working conditions of practising experts are to be taken into account. A general aim of all of these efforts could possibly be that forensic linguistics experts have at their disposal a range of recommendations and quality-assuring measures which suit the diversity of tasks and conditions of the application of forensic linguistics to case work.

Notes

[1]German forensic sciences in general are incorporated in law enforcement, although there is a strict division between investigation and the (scientific) analysis of traces.

[2]For example, the IAFL posted a draft of a code of ethics on its website in May 2013. The document is called "Code of Practice" and is meant to provide "principles of ethical conduct [...] intended to guide those members of the International Association of Forensic Linguistics who engage in forensic linguistic research and legal consulting and testimony" (International Association of Forensic Linguists, 2013: 1).

[3]The following description of reasons for the accreditation is based on presentations and training material of the quality-management team in the Forensic Science Institute (Bundeskriminalamt Germany). The author is especially indebted to Maria Kambosos for her valuable suggestions.

[4]This refers to a Swedish homicide case from 2003 ("Lindh") in which the letter rogatory from Sweden could not be complied. According to the Swedish institutes' norms, a cooperation with other forensic science institutes is only advisable when these laboratories can prove that they work with comparable standards. At that time, the appropriate forensic discipline was not accredited and, thus, could not prove its standards.

[5]The application of the BKA for taking part in the EU Phare Twinning Programme for Turkey has only been successful because of the support of a British forensic science institute that was already accredited.

[6]Other kinds of control mechanisms are internal audits (every 12th month), surveillances by a member of the national accreditation body together with an expert of the forensic discipline concerned (every 16th month) and the process of re-accreditation (every 5th year).

[7]The author is greatly indebted to the participating forensic linguistics experts. Their contribution to the questionnaire comprised many and diverse aspects of an expert's work. Unfortunately, not every aspect mentioned could be related here. This is not meant to imply an evaluation of the contribution in any way.

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