

# “The wording is on occasion somewhat emotional”: a qualitative study of English and German peer reviews for a chemical journal

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**Abstract** Peer reviews are an essential text type in academia. Due to their internal character, however, few empirical studies of the text type exist. This paper reports on a study of a large corpus of peer reviews of manuscripts submitted for publication as *communication/Zuschrift* in the high impact chemical journal *Angewandte Chemie*. There are both German and English peer reviews, although the language of the review is not always identical with the language of the reviewed manuscript. Apart from the language choice of reviews, meta-linguistic comments in them are analysed as well as the vocabulary and style of evaluation and reference to the members of the communicative triad of reviewer, journal editor and manuscript author(s) in the reviews.

**Keywords** peer review, text type, academic communication, meta-linguistic comments, language and style of evaluation

## 1 The publication peer review as a written text type of internal academic communication

Academic careers are subject to all sorts of peer reviewing, starting with external examination of higher research theses such as doctoral theses, to reviews for job applications, grants and scholarships as well as for academic promotions. Peer reviews are particularly ubiquitous for scholarly output such as papers submitted for academic conferences, manuscripts submitted for publication and published books. And of course, all but the most junior academics function as the reviewers at one time as well as the reviewed at other times in all or most of these scenarios.

While peer reviewing is far from a faultless method of evaluating academic quality, it mostly does a reasonably good job at it (notwithstanding spectacular failings in individual cases, such as papers published in peer reviewed journals having to be withdrawn after being found out to present doctored data or even to be hoaxes). Adapting a witty remark about democracy as a political system, one could say that peer reviewing is the worst possible method for evaluating scholarly quality – except for all other methods, of course. Yet in spite of academics evaluating the research of their colleagues all the time in their publications (in the form of positively or negatively evaluating academic intertextuality, cf. Kretzenbacher 1998: 136 f.), book reviews are almost exclusively the only public (and published) form of academic peer reviews, if one does not count evaluative elements in review articles or handbook chapters as peer reviews proper.

Even though different processes of collective (and often partially or completely public) peer reviewing in scholarly networks online are developing (cf. Veletsianos/Kimmons 2012: 770 f.), it is unlikely that a substantial part of peer reviews will change their character any time soon from an essentially internal text type, the authors of which also remain anonymous to the colleagues reviewed in most cases. On the one hand, it is in the interest of colleagues who have been reviewed that a possible refusal of their academic promotion, grant application or submitted manuscript remains internal knowledge of the circle of colleagues immediately

concerned with the process. On the other hand, reviewers' anonymity is conducive to their honest judgment, particularly if reviewer and reviewed are acquainted and/or the reviewer has junior status in comparison with the reviewed.

The mostly internal character of the text type peer review means that reviewers, who often provide their service for free, do not get any career brownie points for peer reviewing in form of publications counted for job applications, tenure or academic promotions. It also means that for new and emerging reviewers, there are very few templates of what a good and helpful peer review looks like, apart from the guidelines provided by the journal or organisation commissioning the review (cf. Paltridge 2013a). Perhaps the most unlucky effect of this internal character of the text type, however, is the number of rumours and myths about an allegedly fundamentally malevolent and negative character of peer reviews circulating among scholars.

This paper is reporting on a current project analysing a corpus of publication peer reviews, the sub-type of academic peer reviews most frequently encountered by scholars. Unsurprisingly for such an important type of academic communication, the corpus of literature dealing with publication peer reviews is large and varied. Studies on publication peer reviews have approached their subject from the viewpoints of ethics (e. g. Lipworth/Kerridge 2011, Souder 2011), of sociology (e. g. Hirschauer 2004), or more specifically sociology of science (e. g. Bornmann 2008), of research politics (e. g. Langfeld 2006), or of scientometrics (e. g. Bornmann et al. 2011), to name just a few. Given the obvious difficulty to access text corpora of a text type of internal communication, it is not surprising that empirical analyses of peer review texts – or other texts within the process of peer reviewing (cf. Gosden 2001) – are relatively rare, compared to studies of the function or institutional role of the text type, such as Gesuato (2009) or Koltay (2010). The list of linguistic, particularly qualitative, analyses of publication peer reviews is a rather short one, given the importance of the text type for academics. Since the turn of the millennium, the most important of these studies are probably Gosden (2003), Matsuda/Tardy (2007), Fortanet (2008), Bromwich (2009), Mungra/Webber (2010), Englander/López-Bonilla (2011) and Paltridge (2013b).<sup>1</sup>

## 2 The corpus

The text corpus of this study consists of publication reviews commissioned by the journal *Angewandte Chemie* (abbreviated AC in the following) for a total of 1,896 manuscripts of articles of the text type *communication/Zuschrift* submitted to AC in the year 2000. Usually, there are two reviews for each communication, although in some cases the reviewing process demands more than just two (see the remarks on that process below). I am very grateful to the chief editor of AC, Dr. Peter Göllitz, for giving me access to the text corpus for a secondary linguistic analysis, after it had been used for a longitudinal scientometric study by the Zurich team led by Lutz Bornmann and Hans-Dieter Daniel.

<sup>1</sup> Scientometric studies with a “content analysis” approach, such as Bornmann/Weymuth/Daniel (2010) or Bornmann/Wolf/Daniel (2012), also deal with linguistic elements of peer reviews, but their analysis is mostly quantitative rather than qualitative.

### 2.1 *The journal Angewandte Chemie and the text type communication/Zuschrift*

The journal *AC* is published by the *Gesellschaft Deutscher Chemiker* at Wiley VCH publishers. Among the top science journals with very high impact factors, *AC* is special in regard to its publication language policy: Apart from *AC-International Edition (AC-IE)*, which is published entirely in English, there is also a parallel edition *AC*, which contains German as well as English contributions. With very few exceptions (such as reviews of German books), all German contributions in *AC* are also published in English translation in *AC-IE*. Until 1998, all English contributions were conversely translated into German for *AC*, however, more recently this has only been the case when authors contribute their own German translation of their English manuscript.

Apart from its function as a newsletter for the *Gesellschaft Deutscher Chemiker*, *AC* is also an interdisciplinary chemical journal, whose target group are industrial and research chemists from all chemical subdisciplines. Accordingly, as opposed to specialised chemical journals that publish full papers, the scientific papers (i. e. the reviewed papers) in *AC* are mostly of the text type *communication* (German: *Zuschrift*). Communications are usually much shorter texts than full papers, and their content must have both a high enough novelty factor and (in the case of *AC*) relevance general enough for the wide scope of the journal's readership in order to justify their much more rapid publication (compared to a full paper), which is essential for claiming new discoveries or technologies in sciences such as chemistry with its mostly clearly defined and fast advancing hot spots of research.<sup>2</sup>

### 2.2 *The reviews*

While the publication review process at *AC* is entirely online now, nothing much apart from the medium of communication between the stakeholders in the process has changed since the year 2000, the date when the corpus was produced.<sup>3</sup> It usually involves three steps, with a possible fourth step added in case of authors' appeals against a rejection (cf. Bornmann/Daniel 2010: 6 f., Gölitz 2005):

- A first internal review of manuscripts is done by editors of *AC*. Manuscripts that obviously do not meet minimal quality standards, or else are not reporting novel enough content or are too special for the readership of *AC*, are rejected at this stage already.
- Manuscripts that have passed the first filter are sent to (usually two, sometimes three) reviewers. In 2000, that happened by physical mail or fax; now it is done by email.

<sup>2</sup> Compared to biological journals with an average refereeing process of over 150 days, or mathematical journals with longer refereeing processes – let alone refereeing processes in the humanities and social sciences –, in chemical publication the time from submission to first online publication (in the form of "accepted article") is estimated as "in most cases less than 50 days, the refereeing often taking less than a month"; for communications in *AC*, the refereeing process takes only "around 15 days". Peter Gölitz (2016: 13621) considers this speedy publication turnover due "to a healthy competition between chemistry journals".

<sup>3</sup> One thing that has changed is the massively increased number of submissions. According to Peter Gölitz (2016: 13621), around 12,000 manuscripts of communications were submitted to *AC* in 2016, of which "a good third (> 4,000) are directly rejected, usually within 36 hours". The total rejection rate, including rejection after peer review, for manuscripts submitted to *AC* is indicated as "almost 80 %" by Gölitz (2016: 13621).

Together with the manuscript, the reviewers receive a review questionnaire and a separate sheet for comments.

- After receiving the reviews, an editor of *AC* decides on the publication of the reviewed manuscript:
  - *If there are two positive reviews, the manuscript (with amendments according to the reviewers' demands, if necessary) is accepted. If the reviewers have demanded substantial re-editing of the manuscript, it can undergo one or more additional rounds of reviewing by the same reviewers.*
  - *If the reviews are substantially different, a third reviewer (called top adviser at *AC*) can be asked for an additional review.*
- In case of a formal appeal against a rejection by an author or authors, the existing reviewers (or new ones) can be asked for a new evaluation of the manuscript.

Both the review questionnaire and the comment sheet contain a letterhead consisting of the name and fax number of *AC*, as well as an individual code number for the manuscript and another one for the reviewer, the short title and corresponding author of the manuscript, and a deadline for the return of the review. The name of the reviewer is recorded at the bottom of both the questionnaire and the comment sheet.

The reviews are forwarded to the manuscript authors in anonymous form, while the reviewers know the names of the manuscript authors, which makes the *AC* review process a single-blind one. A double-blind process, with the manuscript authors remaining anonymous to the reviewers as well as vice versa, would apparently be considered a pointless exercise, given that colleagues who are familiar enough with a particular kind of chemical research in order to review a manuscript dealing with it would normally know exactly which international research teams are engaged in just this kind of research at the time. Reviewers can deal in different ways with this single-blind process and the fact that their review is both addressed directly to the editors of *AC* and to the manuscript authors. Reviewers' adaptations to this multiple addressivity of their reviews range from adding information and evaluation details that are intended for the eyes of *AC* editors only in a separate text (e. g. in the cover sheet of the fax or in the email accompanying the returned review), to explicitly authorising the editors to reveal the reviewer's name to the manuscript author(s), or, on the contrary, instructing the editors not to forward any handwritten comments of the reviewer's to the author of a manuscript, in case that author might recognise that reviewer's handwriting (cf. Kretzenbacher/Thurmair 1992: 142, Kretzenbacher/Thurmair 1995: 208 f.).

The text of the questionnaire is always in English. It contains the following questions:

- 1) How important do you consider the results reported?  
[boxes to tick:] very important / important / less important / unimportant
- 2) Do the data obtained by experiment or calculation verify the hypotheses and conclusions?  
[boxes to tick:] Yes / No
- 3) Is the length of the manuscript appropriate to its contents?  
[boxes to tick:] Yes / No, the manuscript is too long / No, the manuscript is too short
- 4) Do you recommend acceptance of the communication?  
[boxes to tick:] Yes, without alterations / Yes, after minor alterations / Yes, but only after major alterations / No

- 5) If you are of the opinion that the contribution is not suitable for publication in *AC*, please indicate which other journal you consider more appropriate:

Almost all of the boxes to be chosen for ticking have an asterisk added to them referring to a footnote: "(\*) please give comments on the enclosed sheet".

Even with the elements of the questionnaire and the comments sheet provided by *AC*, the returned reviews show a wide range of individual forms. In the reviews returned by email rather than by fax, the individual questions of the questionnaire (or at least their numbers) are usually copied into the email; sometimes the questions themselves are abbreviated or changed into a nominal style in the emails, rather than rendered exactly as in the original questionnaire. Some reviews consist merely of the ticked boxes on the questionnaire, others only of a comment including a recommendation to accept or reject the manuscript. On the other hand, there are reviews that contain more than the two elements of questionnaire and comments sheet. Some have a fax of the original manuscript with the reviewer's handwritten remarks and corrections on it added, others contain an extra message to the editors on a fax cover sheet or in an extra section contained in the email. This wide scope of forms in which the reviews for *AC* are submitted makes the text type a rather heterogeneous one (cf. Kretzenbacher/Thurmair 1995: 183 f.).

### 3 Findings

In the following sections, some of the analytical approaches to the corpus will be presented.

#### 3.1 Language choice

The overwhelming majority of the submitted manuscripts (almost 9 out of 10) are written in English. Only about half a percent of the reviews of these English manuscripts is written in German,<sup>4</sup> in about three percent of the cases, the language in which they are written cannot be determined (because they only consist of boxes ticked in the questionnaire), the rest is written in English. As far as the reviews of the German manuscripts are concerned, however, only about three quarters of them are in the same language, more than one in five is written in English, and the language of the few remaining reviews (again ticked questionnaires) cannot be determined. This language choice of reviewers is not necessarily linked to their own linguistic skills. Of course a reviewer evaluating a German manuscript can be assumed to be proficient in German. But just under half of all the reviewers in our corpus do speak German, even some of those who review English manuscripts in English exclusively. In cases where reviewers never reviewed German manuscripts and never used German in cover emails etc., German language skills were assumed if the reviewer's email or mail address, respectively the country and area code of their fax number, referred to an office in Germany, Austria, or the German-speaking part of Switzerland. The relatively high percentage of almost a quarter of reviews of German manuscripts written in English might have to do with the dominant role that English plays as a lingua franca in academia, particularly in the sciences, but also with the fact that the primary recipients of the reviews are the editors of *AC*, many of whom do not speak German as their first language.

<sup>4</sup> It appears that in those cases the reviewers knew that the manuscript authors understood German rather than assuming that the editors would translate the review into English for them.

Very few reviewers justify their choice of language explicitly, as the following one does in a parenthesis on the fax cover sheet accompanying his English review of a German manuscript:

- (1) *Beiliegend das angeforderte Gutachten. (ich schicke Gutachten besser gleich in Englisch, falls Sie einen weiteren, nicht deutschsprachigen Gutachter benötigen)*  
 [Please find the requested review attached. (I better send the review in English straight away, in case you need another, non-German-speaking reviewer)]

This is also an example for code shifting between the review proper and a paratext of the review.<sup>5</sup> Code shifting (in almost all cases from English to German) often occurs in paratexts directly addressed to the editors rather to the manuscript authors. In many cases, they consist of a German paraphrase of the final recommendation in the review proper in the cover fax or email. Occasionally this recommendation is stronger in the German paratext than in the English review proper:

- (2) [comments page:] *The communication [...] should be recommended for publication in AC.*  
 [cover fax:] *In der Beilage schicke ich Ihnen mein Gutachten [zu Manuskript X], das ich **sehr** zur Veröffentlichung in der AC empfehlen möchte.*  
 [As an attachment, I am sending you my review of [manuskript X] which I would like to recommend **very much** for publication]<sup>6</sup>

Code-shifting occurs in almost one in eight of the English reviews, but hardly at all in the German reviews.

### 3.2 Meta-linguistic comments

Reviews frequently refer to the linguistic form in which the contents of the manuscripts are presented. This can happen in positive and negative ways, and in all constituent parts of the reviews, including paratexts. Often such stylistic remarks are quite general, as in the two following examples. The first one is a sentence in the cover fax transmitted together with a review:

- (3) *this is an excellent paper which is well written*

The second one is a hand-written remark on the questionnaire, next to question 4 (recommendation), where “yes, after minor alterations” is ticked:

- (4) *polish language*

Sometimes, positive and negative evaluations of style allow us to recognise elements of an underlying idea the reviewer has of the appropriate style of the text type communication in AC:

- (5) *Der Text des Manuskripts erfreut durch knappe und nüchterne Formulierungen.*  
 [The text of the manuscript pleases with concise and sober formulations]
- (6) *The wording is on occasion somewhat emotional.*

<sup>5</sup> Code-shifting rather than code-switching, since here (as usually in our corpus) languages are not changed within one and the same text (e. g. comments page, questionnaire, cover email/fax), but between them.

<sup>6</sup> Bold print in quotes is always mine and signals my own emphasis.

Demanding precision of expression often extends to details such as typographical errors. In fact, reviewers have painstakingly corrected such typos in many of the copies of original manuscripts that are attached to the reviews in our corpus. More frequently, however, reviewers insist on a perspicuous style including clearly defined and appropriate terminology:

- (7) *Der [X]. Satz des letzten Abschnitts der Seite [Y] sollte klarer formuliert werden.*  
 [The [X]th sentence in the last paragraph on page [Y] should be phrased more clearly]
- (8) *Legende zu Fig. [X]: Was heißt hier "marked"?*  
 [key to fig. [X]: What does "marked" mean here?]
- (9) *Der Begriff Marker ([im] Kurztext) oder Reporter ([in der] Begründung) sollte einheitlich verwendet [...] werden.*  
 [Either one of the terms "marker" ([in the] short text) or "reporter" ([in the] explanation) should be used consistently]
- (10) *proximal und distal sollte bei erstmaliger Verwendung kurz definiert werden. [...] Die geringe Bindung von [X] hat sicherlich nichts mit Aromatizität zu tun. Das ist eine begriffliche Verwirrung aus der Biologie, wo alle Nucleobasen und Analoga als aromatisch bezeichnet werden.*  
 ["proximal" and "distal" should come with a short definition when used for the first time. [...] The weak bond in [X] certainly has nothing to do with aromaticity. That is a terminological confusion coming from biology, where all nucleobases and analoga are called aromatic]

None of the reviews of German manuscripts ever voice doubts in regard to the German language proficiency of a manuscript's author. In contrast, some of the reviews of English manuscripts criticise a perceived lack of English competence in authors who are apparently not L1 speakers of English (cf. Englander/López-Bonilla 2011, Bocanegra-Valle 2015).

- (11) *the english [sic] language needs polishing by a native speaker<sup>7</sup>*
- (12) *There are just too many places where poor English leaves the reader with no idea whatsoever as to the meaning of a given word, phrase, sentence, etc.*

In the same review that quote (12) is taken from, the next quote follows shortly after. Taken without the context of quote (12), quote (13) could be misunderstood as sarcastic, while it is more likely simply an expression of the reviewer's frustration at being prevented from doing their actual job, the evaluation of the contents of the manuscript, by the poor linguistic form they come in:

- (13) *It is conceivable that embedded somewhere within this manuscript there are some worthwhile and interesting results that might qualify for publication in this journal. But not in the present form.*

<sup>7</sup> The lower-case initial spelling of "English" might just be a typo here, but that does not mean that reviewers who are not English L1 speakers always have an excellent level of English proficiency themselves, even if they write their reviews in that language and/or criticise the manuscript author's English skills. It appears that the level of English required for an internal text type such as the peer review is not perceived as being quite as high as the one for a publication.

Anna Mauranen reminds us that

academic discourses and genres [...] need to be learned as part of becoming a member of an academic community. All novices in academic institutions undergo secondary socialisation into academic discourses, regardless of their linguistic background. There are no native speakers of *academic* language. (Mauranen 2012: 68 f., italics in the original)

Maybe reviewers are particularly strict with the academic English as a lingua franca used by non-native speaking authors of English papers (regardless of whether the reviewers themselves are speaking English as their L1 or not) because it is easy to subconsciously conflate perceived faults in academic English caused by the author being a novice as a scholar and such faults caused by the author not being an L1 English speaker.<sup>8</sup>

### 3.3 Expression of positive and negative evaluation

A sometimes suspected general malevolence of peer reviews can certainly not be confirmed in our corpus. One of the reasons for the overwhelmingly benevolent character of helpful feedback that the reviews in our corpus show might be the fact that the reviewers only get to see such manuscripts that have already passed the filter of a first in-house review by editors of AC (cf. section 2.2).

Even when reviewers reject manuscripts, it rarely happens because they find them lacking in intrinsic quality. Rather, the reviewers frequently find that even high quality manuscripts do not meet the very strict criteria of novelty and relevance for a broad target audience on the one hand and of shortness on the other hand that communications in AC must fulfil, as can be seen in the following example:

(14) *I find the subject of [X] both interesting and important [, but] the paper is not just far too long for a communication [, it is also] difficult to point out possible ways to reduce the length [...]. This is good work, and I feel that it should be published as a full paper in [journal Y].*

The evaluations often follow these criteria (as indicated in the questionnaire as well) closely.

The reviewers are well aware that AC is a top level journal with a very high impact factor, and publication in AC is a privilege only deserved by manuscripts that present content both excellent in quality and relevant for a readership ranging across chemical disciplines:

(15) *This result is certainly not of major interest to the wide and heterogenic [sic] audience of AC and should therefore be published in a more specialized journal.*

(16) *I feel that the material itself is not so attractive for non-specialists as to justify the publication as a communication in AC.*

(17) *Zweifellos sind die Verbindungen für Spezialisten und an [X] Interessierte bedeutsam und sollten in einem Fachjournal, z. B. [Y] publiziert werden.  
[Undoubtedly the compounds are relevant for specialists and persons interested in [X], and they should be published in a specialized journal such as [Y]]*

<sup>8</sup> For a closer look at language choice and metalinguistic comments, analysed in a part of the corpus studied for the present paper, cf. Kretzenbacher 2016.



- (18) *Die in der Arbeit beschriebene Struktur [...] sollte publiziert werden. Für die heterogene Leserschaft der AC ist sie allerdings weniger von Interesse als für Leser aus dem Kreis der anorganischen Chemiker.*  
[The structure [...] described in the study should be published. For the heterogeneous readership of AC, however, it is less significant than for readers from the area of inorganic chemistry.]

Another essential question is whether the manuscript is interesting and relevant enough for a communication in AC:

- (19) *interesting chemical structures [...] interesting aggregation behavior*
- (20) *Gründliche und wichtige Arbeit*  
[thorough and important study]
- (21) *Die hier dokumentierten strukturchemischen Zusammenhänge sind durchaus interessant [...] Der hier im wesentlichen beleuchtete strukturchemische Zusammenhang erscheint mir nicht ausreichend für eine Publikation in der AC.*  
[The correlations of structural chemistry documented here are certainly interesting [...] The structural correlation on which the principal focus is here does not seem sufficient for a publication in AC to me.]

The German adverb *durchaus* in quote (21) weakens the positive evaluation in the adjective *interessant* more than its rough English equivalent *certainly* would; it already flags the overall negative evaluation following soon after.

Originality and novelty of the contents presented is also an important criterion for the decision if the manuscript merits the speedy publication granted to a communication or not.

- (22) *The idea of the authors is original, leading to progress [...] in an important field of medicinal application. This may also stimulate other authors and rapid publication in AC is justified.*
- (23) *This work is publishable and useful but it is not a sufficiently great advance to warrant publication in AC.*
- (24) *A new way to [x] is described here. However, I recommend rejection because the key compounds [...] have already been prepared with slightly different yields by the author's group in [journal X].*

In the context of this originality/novelty criterion, neglecting to include references to previous studies considered relevant by the reviewer is not seen as a minor slip-up. Rather, it can be understood as an attempt to overstate the novelty of one's own paper by omission of earlier work in the field. Consequently, the following quote is among the very few that are quite harsh. It even uses a word entirely in upper-case letters to drive home the point, a strategy highly unusual for a peer review in our corpus:

- (25) *This manuscript does not acknowledge all of the prior work and doesn't even reference it! And no, this referee has nothing to do with either group [quoted as prior work in the review]. I simply read the open literature. The claim that it is a 'new approach' (p. [X], par. [Y]) is NOT true.*

The appropriate shortness and conciseness for a text of the text type *communication* is also seen as important. Sometimes suggestions for cuts are added.

(26) *The paper is much too long for its message.*

(27) *The experimental part is not necessary, this is a communication, not a full paper.*

Last but not least, the quality of data and their presentation and the stringency of argumentation must be high enough for a publication in a journal of AC's standing.

(28) *The quality of the data of [X] is not very good.*

(29) *The paper is interesting [...]. The chemistry claimed seems to be sound, yet the problem is that the paper was prepared without care (I even doubt whether [first author] has seen the manuscript).*

(30) *The authors claim that [...]. However, [...] The presented data actually seems to contradict their claims [...] Overall, the authors have not presented any convincing data to prove their claims.*

The evaluations are given in a rather matter-of-fact und unemotional style throughout. Metaphorical adjectives and adverbs from the fields of ethics and aesthetics are usually only found in strongly conventionalised form, all but devoid of their original semantics.

(31) *nice selectivity is seen*

(32) *the table [...] nicely illustrates [X]*

(33) *eine attraktive Synthese*  
[an attractive synthesis]

(34) *describes a very nice result [...] the rather beautiful structure*

There are only very few instances where modal adverbs or modal particles are used that betray the attitude of the reviewer.

(35) *Es fehlen leider Angaben zu [X] [...] [Verfahren Y] ist doch mittels [Methode Z] völlig unzuverlässig.*

[Unfortunately, indications of [X] are absent [...] [Procedure Y] using [method Z] is obviously completely unreliable]

(36) *The findings are remarkable. Unfortunately the paper contains too many details for a short communication.*

Even the most enthusiastic evaluations are presented in a relatively restrained manner.

(37) *very impressive electron microscopic images*

(38) *This is an excellent ms. which should be published as submitted.*

(39) *eine ausgezeichnete, sehr komplette Arbeit. [...] [X] wird sowohl überzeugend in Lösung nachgewiesen als auch über eine bemerkenswerte [Y]-analyse*  
[an excellent, very comprehensive study. [...] [X] is not only shown convincingly in solution, but also via a remarkable [Y] analysis]

The peak of enthusiasm is reached in a characterisation such as the following:

(40) *another breakthrough in [method X] by the authors*

Similarly, negative evaluations are also expressed in a rather mild manner. Quote (42) is the most scathing judgement in the whole corpus.

(41) *I do not consider this work to be of the standard reported in AC.*

(42) *The scales bar for Fig [X] is crazy [...] This all has to be done more carefully.*

### 3.4 Self-reference of reviewers

The statistical evaluation of the corpus has not been completed yet, but the general impression is that in German reviews, the first person singular is used less frequently than in English ones. Such a linguistic difference (reflecting a cultural one between Anglophone and German academic cultures) would agree with results of the analysis of corpora of published academic texts in both languages (such as the recent one by Wu 2015). In many cases, there is no reference to the reviewer whatsoever in any part of the review, or the reference is given in a form that avoids the first person singular.

(43) *publication as full paper elsewhere **is recommended***

(44) *da **man** sonst vermuten könnte [...] Das [= Ablehnungsempfehlung] müsste **man** anders beurteilen, wenn etwa physikalische Eigenschaften diskutiert würden [...]. Im Folgenden **seien** noch einige Anmerkungen zum Text **aufgeführt**.*

*[since **one** could otherwise assume [...] **One** would have to judge this [i.e. the recommendation to reject] differently if e. g. physical properties were discussed [...]. In the following, a few remarks regarding the text **might be allowed to be listed**]*

Sometimes, first person singular and impersonal formulations both appear in the same review, either within the same text (as the German infinitive construction and then the first person in quote 45), or in different component texts.

(45) *unbedingt zur Annahme in der AC **zu empfehlen** [...] **ich** würde [...] nach **meiner** Erfahrung*

*[absolutely **to be recommended** for publication in AC [...] **I** would [...] in **my** experience]*

(46) [in the cover fax:] *die **ich** sehr zur Veröffentlichung als Communication in der AC empfehlen möchte [which I would like to recommend very much for publication as a communication in AC]*

*[on the comments page:] The communication should be recommended for publication in AC.*

(47) [in the cover fax:] ***I** do not detect [...] **I** would reserve judgment*

*[on the comments page:] **This reviewer** is not persuaded [sic] by color changes and physical measurements alone into believing that [...].*

### 3.5 Multiple addressivity

The reviews are directly addressed to the editors of *AC*, but indirectly also to the authors of reviewed manuscripts. There is a rather clear association of constituent texts or text sections with primary addressees: cover faxes/emails and questionnaires are primarily addressed to the editors, as are short summaries of the main points of the manuscript content often preceding the evaluative comments on the comments pages. These evaluative comments themselves, as well as suggestions for amendments of the manuscripts, are mainly addressed to the manuscript authors.

The reviewers are well aware of the communicative triad constituted by this communicative situation. This can not only be seen from stylistic differences between different constituent texts and text sections, such as the often more personal tone of the cover fax or email in comparison to the comments page, but also in differences between text sections of the comments that have different functions.

Even though the authors are hardly ever directly addressed in the second person, but rather referred to in the third person, there are instances of advice or even appeal to them.

(48) Falls *umbedingt* [sic] eine Kürzung vorgenommen werden muss, **könnte man den Autoren raten** nur die Beschreibung des Endproduktes in Ihrem [sic] Manuskript zu belassen.

[In case the manuscript absolutely has to be shortened, **one could advise the authors** to leave only the description of the final product in their manuscript.]

(49) I ask **the authors** to understand my concerns about publishing this paper in *AC*.

Questions – often very detailed ones – that are apparently addressed to the authors are quite frequent in the comments pages/sections of the reviews.

(50) Fig. [X] [...]: Sind die nach oben gerichteten Banden ein Artefakt, oder entsteht 4 aus 1 und 3? [...] Fig. [Y]: Sind Banden [...] relevant?

[Fig. [X] [...]: Are the bands pointing/oriented upwards an artefact, or is 4 the product of 1 and 3? [...] Fig. [Y]: Are bands [...] relevant?]

(51) On p. [X] [...] where is the spectroscopic evidence? P. [Y]: are the ppm given here bound shifts for 100 % complexation? [...] Again, are the data based alone on [Z] shifts?

(52) Is there any similarity between this material and others that contain [X] [...]?

Suggestions for corrections or amendments are sometimes formulated in the indicative, but often oscillating between more and less direct forms in the same text or text section.

(53) The authors **must** take into account the following comments: [...] Some statements in the text **should be** [...] drastically **modified** [...]. [X] **must be** correctly **cited**. [...] statements to illustrate [Y] **must be cited**. [...] The authors should give information regarding [Z].

(54) The authors **need to** address [X] [...]. [Method Y] is recommended [to the authors by the reviewer]

Impersonal formulations are used more frequently than open directions, often in the form of modal verbs, mostly in the passive voice.

- (55) *I suggest **redoing** the calculations with a [X] basis. **One might start** with [...]. I suggest to **give** a more complete picture of the experimental and theoretical data and to elaborate on the discussion.*
- (56) ***sollten** [...] **herausgearbeitet werden**  
[**should be presented** in detail]*
- (57) *this generalization **should have been attempted** [...] Refer. [X] **should read** [...]*
- (58) *the chemical composition of [X] **should be given** somewhere*
- (59) *At present, it looks like a full paper that **could be submitted** to [journal X].*

#### 4 Conclusion and outlook

The corpus shows a wide range of texts and text groups constituting publication reviews for AC. In the majority of cases, the language of the review is identical with that of the reviewed manuscript, but there is a substantial number of English reviews of German manuscripts (while the reverse case occurs very rarely). The reviewers generally look very closely at the linguistic presentation of the manuscripts, this includes criticism of perceived lack of English language competence in authors for whom English is not their L1.

Evaluation, both positive and negative, is usually presented in rather restrained language. The triadic communication situation between reviewers, editors at AC and authors of reviewed manuscripts has consequences for the forms of reference to each of the partners in the communication. Self-reference to the reviewers does occur, albeit apparently more often in constituent texts and text sections addressed to the editors than those addressed to the manuscript authors, and also seems to be more frequent in reviews written in English than in German reviews. Advice to the authors is often hedged in impersonal form or expressed with modal verbs. While the manuscript authors are hardly ever addressed in the second person and direct imperatives do not occur in the corpus, questions obviously addressed to the manuscript authors are a frequent feature in the comments sections of reviews.

The analysis of the corpus is continuing. Statistical analyses of evaluative vocabulary and self-reference to the reviewers will be among the further steps of the study. A comparison with the scientometric studies by the Zurich team regarding the validity of reviewers' evaluations of manuscripts as a prediction of the success or otherwise of manuscripts published in AC or (in the case of rejection by AC) in another journal would also be interesting: Are there linguistic features of positive or negative reviews that indicate future success or failure of a paper (measured by the frequency at which it is quoted after publication)? In the longer term, a comparison of our corpus with an English and/or a German corpus of publication peer reviews for a journal in another academic field (e. g. within the humanities) might also bring interesting results.

Peer reviews, useful and ubiquitous as they are in academia, are still surrounded by a certain mystique, due to their internal and non-public character. The empirical analysis of corpora of peer reviews can help to dispel myths and rumours around this text type.

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