THE WINNER TAKES IT ALL: STANCE AND ENGAGEMENT MARKERS IN SUCCESSFUL PROJECT PROPOSAL ABSTRACTS FUNDED BY ERC

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Abstract
This paper aims to investigate frequency and distribution patterns of stance and engagement markers across different science fields in European Research Council funded project proposal abstracts. Three science fields analysed using corpus-based quantitative and qualitative methodology are life sciences, physical sciences and engineering, and social sciences and humanities. A corpus consisting of 90 project proposal abstracts was compiled and each text was examined for stance and engagement markers following Hyland’s (2005b) framework of stance and engagement. The results show that stance markers were used much more frequently than engagement markers in all science fields analysed. However, it was found that compared to writers in social sciences and humanities, authors of life sciences and physical sciences and engineering abstracts tended to use more stance markers which may suggest a greater importance placed on creating a stronger authorial persona. In social sciences and humanities abstracts, on the other hand, engagement markers were more frequent than in the other two fields, which may imply that their texts are slightly more reader focused. The results of the study shed light on competitive funding discourse which is still scarcely researched, as well as reveal strategies and techniques used to create effective scientific discourse.

Keywords
stance, engagement, competitive research funding, project proposal abstracts, European Research Council, cross-disciplinary study

1 Introduction
Author stance has become one of the key notions in the explorations of academic rhetoric over the past few decades. This is hardly surprising as author stance is “central to ways of looking at written texts as social interactions, where readers and writers negotiate meanings” (Sancho Guinda & Hyland 2012: 1) and writers use stance to highlight their authority as a scholar to have their research accepted as rhetorically convincing (Fløttum et al. 2006). Another element of scientific rhetoric going hand in hand with stance in academic texts is engagement. Linked to communal solidarity, shared experiences and values as well as building rapport with the reader, engagement is an indispensable part of academic discourse, as “[r] esearch writing is only successful to the extent that writers are able to create an appropriate relationship with their readers” (Hyland
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2019: xii). Referred to as the “poor relation in discussions of interaction” by Hyland (2019: xii) and the “flipside of the interactional coin” by Jiang and Ma (2018: 1), engagement nevertheless has been more firmly rooting in the studies of academic discourse as successful communication has been increasingly recognised to depend on the writing style (see, e.g. van den Besselaar & Mom 2022).

Elements of stance and engagement have been analysed within various frameworks and under various titles (see, e.g. Vande Kopple 1985, Crismore et al. 1993, Martin & White 2005, Ådel 2006, Hood 2012). However, within the field of academic discourse, Ken Hyland’s stance and engagement model (2005b) has attracted considerable attention and has been applied to an extensive number of studies analysing disciplinary and cultural properties of academic texts. In Hyland’s model, stance resources consist of hedges (to mitigate propositions), boosters (to communicate the author’s certainty), attitude markers (to express the author’s attitude towards propositional content) and self-mention (to explicitly refer to the author). Engagement markers allow the author to engage with the reader with the help of such engagement markers as reader pronouns, directives, questions, appeals to shared knowledge and personal asides.

Markers of stance and engagement have been extensively investigated from cross-cultural perspectives, i.e. typically in one academic culture in comparison to English. Many of these studies show that there is increasingly more visibility of the author in texts written in English (see, e.g. Mur-Dueñas (2011) for English and Spanish, Dahl (2004) for English and French, Šinkūnienė (2014) for English and Lithuanian). Alternatively, scientists in certain academic cultures, like, e.g. Czech, resort to some of these resources more intensely than English native speaking scholars, apparently seeking to create the sense of commonality and shared values with the members of academic community to a larger extent (Dontcheva-Navratilova 2020).

Another strand of research focuses on the use of these markers in different disciplines or entire science fields. The so-called hard and soft fields (Becher 1994) are frequently contrasted to reveal the specific epistemological practices of argumentation and the ways knowledge is created in different broad disciplinary domains. Such studies (see, e.g. Hyland 2005b, 2008) show that there is clearly a difference in how academic writers construct their texts “with those in the humanities and social sciences taking far more explicitly involved and personal positions than those in the science and engineering fields” (Hyland 2008: 12-13). Interestingly, diachronic studies of stance and engagement show that there is a significant decrease of the use of these markers in the soft disciplines, and an increase in the hard sciences (Hyland & Jiang 2018). In any case, the take away
message of many of these empirical studies is that every scholar has to be very aware of what epistemological traditions, trends and patterns are prevailing in their “disciplinary culture” (Mauranen 1993) to be considered a reliable scientist and author, an “insider” of the disciplinary community (Hyland 2006: 19).

Many of the studies mentioned above focus on the research article as a genre. This is perhaps unsurprising as the research article is considered to be the main means to communicate relevance and novelty of the research results to academic community (Hyland 2005a: 89-90). However, especially in the past few decades the abstract has received an increasing attention of scholars investigating academic discourse. Bordet (2014) explains the importance of the abstract as a genre by its inherent capacity to attract the interest and attention of the audience. Hence a convincing abstract can act as a gateway to getting published or being accepted to a conference. Gillaerts and Van de Velde (2010: 128) draw attention to the fact that “abstracts are not just pale reflections of the full-length articles, but rather have a specific make-up”, which makes this genre specifically attractive to delve into the practices of academic persuasion in a variety of ways.

Indeed, most of the research on abstracts has been focused on research article abstracts (Dos Santos 1996, Martin Martin 2003, Stotesbury 2003, Diani 2014, Friginal & Mustafa 2017, Li 2021), on conference abstracts (Yakhontova 2006, Cutting 2012, Samar et al. 2014, Treanor et al. 2020) or on MA thesis or PhD dissertation abstracts (Ozdemir & Lango 2014, Xie 2020, Nasseri & Thompson 2021). These studies revealed a host of interesting and important cross-linguistic, cross-disciplinary, cross-generic insights into the art of abstract writing from both synchronic and diachronic perspectives. However, considering the promotional nature of the abstract, it is surprising that little attention has so far been devoted to competitive funding proposal abstracts. Most of the existing research on grant proposal discourse focuses on the move structure of grant proposal abstracts or full grant proposals (Connor & Mauranen 1999, Connor 2000, Feng & Shi 2004, Cotos 2019, Matzler 2021), yet much of it dates back nearly twenty years. A refreshing addition to discourse analysis of competitive funding is research by Neil Millar and his colleagues (Millar et al. 2022, 2023). Their studies on promotional language and epistemic stance in successful US National Institutes of Health grant applications show that scholars display a very confident and optimistic stance towards their planned research and that levels of promotional language have increased over time. Millar et al. (2022: 9) conclude that “applicants, reviewers, and funding agencies should be aware of the increasing prevalence of promotional language in funding applications”.

The above mentioned two studies have focused on full grant proposals but only on one specific funder and in one specific disciplinary field, and hence in
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the competitive research funding environment more studies on how successful applicants conceptualise their stance, organise their proposals and engage with readers is crucial, especially from an interdisciplinary perspective. The focus of this study, therefore, is on abstracts of successful proposals which resulted in grants provided by the European Research Council (ERC) to researchers from three broad science fields. As stated on the ERC webpage, “[t]he ERC, set up by the European Union in 2007, is the premier European funding organisation for excellent frontier research. It funds creative researchers of any nationality and age, to run projects based across Europe” (European Research Council 2023). The ERC grants are undoubtedly one of the most prestigious grants available to scholars from any disciplinary field. They are also one of the most challenging to obtain and so applicants must display excellence in all aspects of their proposals in order to secure the grant, including the abstracts. Therefore, in this paper we aim to investigate frequency, repertoire and employment patterns of stance and engagement markers in successful ERC advanced grant application abstracts submitted by leading, experienced principal investigators from three broad science fields: life sciences, physical sciences and engineering, and social sciences and humanities.

2 Data and methods

For this corpus-based quantitative and qualitative study, a corpus was compiled using project abstracts from the ERC database of funded projects. The database consists of entries for all projects that have been funded by the ERC. All entries in the database include basic information about each project: acronym, title, details such as the grant type, principal investigator’s name, host institution and country, and the project’s abstract. It is stated in the grant application form that the abstract (alternatively called summary) should not exceed 2,000 characters including spaces, that it should be precise and provide the reader with a clear understanding of what the research proposal aims to achieve and how it will be achieved. Importantly, the application form states that the abstract will be used in the evaluation process as well as in the search for potential external reviewers.

The ERC grants are of three categories. The first category is the starting grant, which is suitable for the applicants with two to seven years of research experience since the completion of their PhD. The consolidator grant requires the applicants to have seven to twelve years of research experience since the completion of their PhD. Finally, the advanced grant is directed at experienced, leading, ambitious principal investigators “who have a track-record of significant research achievements in the last 10 years” (European Research Council 2023).
The online platform where abstracts of successful research proposals can be accessed lists the category of the grant, the year of the call, the host country of the successful principal investigator and the science field to which the proposal is attributed. All the proposals are grouped into three science fields (social sciences and humanities, life sciences, physical sciences and engineering) which are further subdivided into thematic panels such as, for example, *The Study of the Human Past; Physiology, Pathophysiology & Endocrinology; Fundamental Constituents of Matter*, etc.

For this study, we decided to choose the advanced grant, so the principal investigators who were the authors of the project abstracts were accomplished scholars with extensive experience in their respective science fields. The most recent time span of the submission of research proposals was chosen, which at the time of compiling the corpus was 2018 and 2019. All three science fields were included into the dataset; however, since there was an unequal number of thematic panels and each thematic panel contained an unequal number of successful projects, to ensure comparability between different science fields only three thematic panels with the highest number of successful proposals were chosen from each scientific field. Then from each of these three thematic panels per science field, abstracts of ten most recent approved projects were included into the corpus, thus resulting in a corpus of 90 project abstracts from three different science fields, written by accomplished scholars in 2018-2019. The country of origin of the principal investigator was not taken into account as it would have been difficult to ensure comparability between the three science fields. The size and the composition of the corpus is shown in Table 1.

<table>
<thead>
<tr>
<th>Sub-corpus</th>
<th>Number of words</th>
<th>Number of abstracts</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social sciences and humanities</td>
<td>8,536</td>
<td>30</td>
</tr>
<tr>
<td>Life sciences</td>
<td>8,535</td>
<td>30</td>
</tr>
<tr>
<td>Physical sciences and engineering</td>
<td>8,710</td>
<td>30</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>25,781</strong></td>
<td><strong>90</strong></td>
</tr>
</tbody>
</table>

Table 1: Composition and size of the corpus of ERC funded project abstracts

Examples provided in the paper are coded using abbreviations SH, LS and PE representing respectively social sciences and humanities, life sciences, and physical sciences and engineering, and the number of the research proposal abstract in the listing of the empirical dataset.

For the analysis of this paper, Hyland’s (2005b) framework of stance and engagement was selected. Stance communicates the writer’s attitudes “which refer to the ways writers present themselves and convey their judgements, opinions, and commitments” (Hyland 2005b: 176). Engagement, on the other hand, helps
the writer “rhetorically recognise the presence of their readers to actively pull them along with the argument, include them as discourse participants, and guide them to interpretations” (Hyland 2008: 5). The subcategories of stance and engagement markers are illustrated in Figure 1.

![Stance and engagement markers](image)

**Figure 1: Stance and engagement markers (Hyland 2005b: 177)**

As can be seen from Figure 1, four important categories can be employed to communicate the stance of the author. Hedges soften the proposition and/or show that the author is not fully certain or committed to it.

1. *Arguably,* the most important function of color is the processing of information about objects in scenes. (SH-2)

   Differently from hedges, boosters make the proposition sound more assertive showing that the writer is certain or committed to it.

2. *We here propose three completely new and high-risk strategies to prevent CMD in large subsets of the population, who have elevated risk due to measurable endocrine abnormalities.* (LS-6)

   Attitude markers help the writer express affective stance signalling importance, surprise, frustration, etc.

3. *These groundbreaking studies should illuminate how conserved signaling pathways work through the nucleolus to regulate health and life span.* (LS-30)

   Self-mention, expressed with the help of personal pronouns *I* and *we* and their forms explicitly mark the presence of the author in the text.

4. *We propose to design and build switchable synthetic molecules that are capable of communicating and processing information.* (PE-13)

   This particular sub-category of stance required the distinction between inclusive and exclusive *we.* Following Vladimirou (2007: 141), all cases when
the author(s) referred only to themselves were considered as exclusive *we*, and all cases when *we* was used to refer to the author(s) and academic community/readers or human beings in general were considered as inclusive *we*.

Engagement with the reader can be achieved with the help of five categories of markers. Reader pronouns, typically manifested by the inclusive *we*, create shared ground with the readers and invite them to participate in the discourse.

(5) *Human thoughts have no mass and remain definitely hidden from others’ view. Still, we are remarkable at predicting others’ mental states from observable phenomena.* (SH-7)

Questions help to create an inaudible dialogue between the writer and the reader, drawing the attention of the readers to specific research problems or research aims.

(6) *But what of the fundamental, functional cellular building block of this architecture – the single neuron and its dendritic tree?* (LS-18)

Appeals to shared knowledge signal that a piece of information is likely to be familiar or agreed upon by the disciplinary community.

(7) *History has traditionally prioritised literary texts, creating a Helleno- and Romanocentric narrative, which often relegates the island to a footnote.* (SH-14)

Finally, directives instruct the reader to perform a certain textual, physical or mental act, and personal asides allow readers to interrupt the text and offer a personal comment in the shape of an imitated dialogue. Neither directives nor personal asides were found in the analysed texts that is why no illustrative examples are provided.

Stance and engagement markers were identified manually by carefully reading each abstract multiple times. After the manual analysis was completed, lists of markers for each specific category were compiled and WordSmith Tools software (Scott 2020) was used to generate concordance lines for each of the marker to ensure that all of them were identified in the texts. Contexts of the use of each marker were carefully examined to make sure that each marker expressed stance or engagement rather than propositional content.

Since the three sub-corpora are of different sizes, raw frequency numbers have been normalised to 1,000 words. The statistical significance of the compared frequencies was evaluated with the help of the log-likelihood calculator (LL) with the critical value of 3.84 or higher at the level of p <0.05.
3 Results and discussion

In the sub-sections that follow we first overview the overall frequency and distribution trends of stance and engagement markers. Then we discuss the types of stance and engagement markers, as well as patterns and characteristics of their use across different science fields.

3.1 Frequency and distribution of stance and engagement markers

Table 2 below shows that in the analysed research project abstracts stance markers are around ten times more frequent than engagement markers.

<table>
<thead>
<tr>
<th>Markers</th>
<th>Life sciences</th>
<th>Physical sciences and engineering</th>
<th>Social sciences and humanities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>raw</td>
<td>$f/1,000$</td>
<td>raw</td>
<td>$f/1,000$</td>
</tr>
<tr>
<td>Stance</td>
<td>459</td>
<td>53.8</td>
<td>377</td>
<td>43.3</td>
</tr>
<tr>
<td>Engagement</td>
<td>31</td>
<td>3.6</td>
<td>24</td>
<td>2.8</td>
</tr>
<tr>
<td>Total</td>
<td>490</td>
<td>57.4</td>
<td>401</td>
<td>46.0</td>
</tr>
</tbody>
</table>

Table 2: Overall frequency distribution of stance and engagement markers

Similar tendencies were found in most other studies that compared frequencies of stance and engagement markers in academic texts. Hyland (2005b), for example, found stance markers to be five times more common than engagement markers in full research articles. Alghazo et al. (2021) studied research paper abstracts and found that engagement markers made up only three per cent of all stance and engagement markers. Both the results of this paper and the results of Alghazo et al. (2021) suggest that academic abstracts may display a greater difference between the distribution of stance and engagement markers than research articles.

In their study of stance and engagement markers in pure mathematics research articles, however, McGrath and Kuteeva (2012) found that engagement markers were significantly more common than stance markers. This may be the result of highly specific disciplinary practices as a typical knowledge construction pattern for pure mathematics calls for an active inclusion of the reader “through the frequent use of directives and the inclusive we, explicit shared knowledge references to create an expert authorial persona” (McGrath & Kuteeva 2012: 171). Since abstracts in the present study come from a variety of disciplines and subdisciplines, the trends we notice may be the outcome of a disciplinary blend which may therefore contrast with the patterns observed in individual disciplines.
A significantly larger share of stance markers may suggest that for writers of ERC project abstracts it is important to display their authorial persona. As a genre, abstracts are short, and it is imperative that the author stands out among other candidates who apply for ERC grants. The lower number of engagement markers may also suggest that leading the reader through the interpretation is less important. This does not seem unexpected because of the communicative purpose of the abstract and its short length. As the abstract presents essential information only and focuses on the objectives and importance of the study, there is less need (and space) to get the readers very much involved in the argumentation, which is typically more frequently done while presenting the results and discussing them.

A comparison of the frequency of the markers across different science fields shows that in terms of engagement there is no statistical difference between life sciences abstracts and physical sciences and engineering abstracts (LL value is +1.04). It is only abstracts in social sciences and humanities that show statistical difference from life sciences and physical sciences and engineering abstracts (LL values are respectively +18.16 and +10.53). However, the difference of stance marker use is statistically significant across all three different fields. Log likelihood value for life sciences vs physical sciences and engineering stands at +9.81, between physical sciences and engineering and social sciences and humanities at +14.35, and between social sciences and humanities vs life sciences at -47.22. Interestingly, the use of stance markers was lowest in the social sciences and humanities field. As already mentioned in the introduction, Hyland and Jiang (2018) show diachronic changes in the employment of stance and engagement markers and both seem to be increasingly more favoured by the hard sciences scholars. A much higher expression of stance markers in the hard sciences field may also suggest a higher scholarly competition for prestigious grants in life sciences and physical sciences and engineering fields in comparison to social sciences and humanities. As we will see in the following sections, it is especially scholars in hard sciences who emphasise the novelty and importance – two pre-requisites of potentially successful proposals – of the proposed research to a large extent.

3.2 Distribution of stance markers in different science fields

Table 3 shows the distribution of stance markers in different science fields as well as different sub-types of stance markers found in the corpus. Despite their slightly varying overall frequency across the three sub-corpora, attitude markers were the most frequently occurring stance markers in the analysed abstracts in all three science fields. In contrast, hedges were relatively scarce, with scholars in the hard science fields employing them to the lowest extent in comparison to all
other stance markers. Surprisingly, social sciences and humanities scholars also rarely mitigated their propositions in their abstracts. This is an interesting finding as it is in stark contrast with, for example, Hyland’s (2005b) research on stance markers in research articles of eight disciplines representing the whole spectrum of soft and hard fields. In Hyland’s study, hedges were the most frequently employed stance marker irrespective of the discipline. This difference in trends can be explained by the difference in genres. Most of hedges in research articles would occur in the results and discussion sections where researchers would be presenting the results obtained and explaining why the results are the way they are. The interpretation of discovered trends could involve much speculation and uncertainty, hence a high frequency of hedges in research articles. In contrast, abstracts would not typically discuss and interpret results as it is a research proposal only and so mitigation of arguments and propositions is more rarely required.

<table>
<thead>
<tr>
<th>Stance markers</th>
<th>Life sciences</th>
<th>Physical sciences and engineering</th>
<th>Social sciences and humanities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>raw</td>
<td>£/1,000</td>
<td>raw</td>
<td>£/1,000</td>
</tr>
<tr>
<td>Hedges</td>
<td>48</td>
<td>5.6</td>
<td>42</td>
<td>4.8</td>
</tr>
<tr>
<td>Attitude markers</td>
<td>188</td>
<td>22.0</td>
<td>198</td>
<td>22.7</td>
</tr>
<tr>
<td>Boosters</td>
<td>89</td>
<td>10.4</td>
<td>85</td>
<td>9.8</td>
</tr>
<tr>
<td>Self-mention</td>
<td>134</td>
<td>15.7</td>
<td>52</td>
<td>6.0</td>
</tr>
</tbody>
</table>

Table 3: Stance markers by science field

One more interesting tendency to be noted is for self-mention to be markedly more frequent in life sciences research proposal abstracts where personal pronouns I and the exclusive we were used interchangeably to refer to either the principal investigator alone or together with their team. In contrast scholars in physical sciences and engineering and especially scholars in social sciences and humanities would frequently employ this/the project to refer to the overall objectives and aims of the research proposal. These and other trends of the use of stance markers are overviewed in more detail in sub-sections below.

3.2.1 Attitude markers

Attitude markers convey the writer’s affective attitude towards propositions and indicate, for example, that the writer finds something important or surprising. The results in Table 3 show that for scholars in all three analysed science fields it was very important to convey their affective attitude. Rather different results
were shown by McGrath and Kuteeva (2012) as they found attitude markers to occur significantly less frequently in their study of pure mathematics research articles. Yet, the authors admit that attitude markers “play an important part in the creation of a credible authorial persona” (ibid.: 167) in research articles, and thus it can be assumed that they play an even more important role in the grant proposal abstracts due to a more promotional nature of the genre.

Attitude markers constituted not only the most numerous group of markers under study but also the most diverse and idiosyncratic one. The biggest variety of attitude markers was observed in social sciences and humanities research proposal abstracts (86 different markers), closely followed by physical sciences and engineering (85 different markers), with life sciences scholars expressing their attitude with the help of 73 different markers. Many of these markers were used one time only while talking about pivotal questions, severe risks, tantalizing possibilities, virgin fields, violent debates, unrivalled data, cutting-edge technology, revolutionary options, etc. As can be guessed from the examples above, many of these adjectives would occur in prototypical rhetorical moves of the abstract describing the status-quo of the problem, identifying the niche, presenting the purpose of the study, describing data and methods and the likely results and implications of the proposed project. Millar et al. (2022) call such adjectives “hype” and show that their frequency in abstracts of successful National Institutes of Health grant applications has increased over the period of 1985-2020. They identified a total of 139 hype adjectives and discovered that as many as 130 of these adjectives were used increasingly more often, with only nine adjectives having decreased in their frequency of use (ibid.).

Table 4 below shows five most frequently used attitude markers identified in the abstracts of different science fields.

<table>
<thead>
<tr>
<th>Life sciences</th>
<th>Physical sciences and engineering</th>
<th>Social sciences and humanities</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitude marker</td>
<td>Raw #</td>
<td>Attitude marker</td>
</tr>
<tr>
<td>new</td>
<td>27</td>
<td>new</td>
</tr>
<tr>
<td>novel</td>
<td>25</td>
<td>key</td>
</tr>
<tr>
<td>major</td>
<td>12</td>
<td>novel</td>
</tr>
<tr>
<td>unique</td>
<td>10</td>
<td>unique</td>
</tr>
<tr>
<td>key</td>
<td>8</td>
<td>unprecedented</td>
</tr>
</tbody>
</table>

Table 4: Five most frequent attitude markers across different science fields

We can see that abstracts in all three science fields emphasise novelty with two adjectives, *new* and *novel*, appearing in the list of five most frequent attitude
markers in all three science fields. A similar result was observed in the diachronic study by Millar et al. (2022), where the largest absolute increase was recorded for adjectives *novel, critical* and *key*.

Bearing in mind the significance of the abstract of the grant proposal and the highly competitive nature of research funding, it is not surprising that attitude markers pointing to novelty and uniqueness of the research are a popular choice helping the authors to try to make their proposals stand out in the competition. Both (8) and (9) illustrate these effects.

(8) I expect PreciseCellPD will generate **groundbreaking** knowledge of the mechanisms controlling the generation of human A9/SNs and will set the basis of a **novel** and **transformative** precision cell replacement therapy for PD. (LS-5)

(9) In concert, these scientific developments will enable the **accurate** and **fine grain** monitoring of biodiversity from space – a **ground-breaking** contribution to the quest to meet the UN Sustainable Development Goals and CBD Aichi targets. (SH-29)

While (8) explicitly argues for the importance, novelty and the transformative potential of the proposal, (9) emphasises great attention to detail alongside the pioneering nature of the proposal.

Quite frequently, attitude markers were used to highlight the previous experience of the principal investigator, properties of his/her proposed team, or facilities of the institution. This feature is especially obvious in life sciences, physical sciences, and engineering fields where scientists work in groups and where technological capacities of the institution may play a crucial role in the successful research trajectory of scientists. Examples (10) and (11) are cases in point.

(10) As **I show** with the discovery and functional characterization of ERCC6l2 as a **novel** DNA repair factor in this network, the technology we have in place is perfectly suited to tackle this question. (LS-8)

(11) Based on **my broad knowledge** and **expertise** in all the relevant areas, and the **unique** experimental capabilities of the GSI/FAIR facility, **I am in prime position** to advance our understanding of r-process nucleosynthesis. (PE-5)

In (10) the principal investigator refers to their previous research achievements and the outstanding technological capacities of their institution as a guarantee for a successful future work. Similarly, in (11) the principal investigator directly emphasises their expertise and exceptional institutional facilities as a prerequisite to move the field forward.
Attitude markers also allowed the writers of research project abstracts to comment on the complexity of certain problems faced by the project or solutions that either already exist or are yet to be found. Example (12) shows how the writer uses the word *enigmatic* to describe the object of their study as difficult to understand. This communicates to the reader that the object of the study has not yet been researched enough and, therefore, is a suitable candidate for future research. The writer in Example (12) plays with academic tradition of seeking yet unfound knowledge, making their project seem necessary.

(12) *The proposed project will focus on precisely that question, in an attempt to unravel what is perhaps the most enigmatic episode of ‘Great Wall’ construction.* (SH-19)

In some cases, attitude markers would be used together with boosters, thus strengthening the promotional effect of the claims to a larger extent.

### 3.2.2 Boosters

Hyland defines boosters as markers which help the writers “to express their certainty in what they say and to mark involvement with the topic” (2005b:179). As boosters were among frequently occurring stance markers in all three sub-corpora of ERC funded project abstracts, communicating certainty and showing a high level of involvement in the field seems to be an important effect frequently going hand in hand with expressing affective attitude with the help of attitude markers or emphasising the presence of the author with self-mention markers, as exemplified in (13)-(15):

(13) *This highly ambitious project combines frontier chemical and biochemical research and will deliver completely new classes of enzymes* (PE-12)

(14) *We are confident that our approach at the frontiers of modern neurosciences carries the potential for groundbreaking results to answer a timely question.* (LS-13)

(15) *It will change how we think of China and its governance and be the first of its kind to explicitly consider indigenous perspectives on Chinese urban transformation.* (SH-30)

In (13), boosters *highly, will and completely* combined with attitude markers *ambitious, frontier and new* create promotionally strong discourse with regard to the nature and potential outcomes of the proposed research. Example (14) is even rhetorically stronger as the booster *confident*, combined with the personal pronoun *we*, creates the impression of a very strong commitment on behalf of the authors, while attitude markers *at the frontiers, groundbreaking and timely*
emphasise the importance and relevance of the methodology and results. In (15)
the author of the project promises a radical improvement on the global thinking
of China and its governance (note the use of the inclusive we) and without
hesitation communicates certainty that the proposed project is the first of its kind.

Just as was the case with attitude markers, boosters could be used to
emphasise previous achievements of the principal investigator and their teams,
as exemplified by (16):

(16) We were first in describing sheltering mutations in cancer and pioneered the idea
of targeting sheltering as an anticancer strategy to induce length-independent
telomere damage. (LS-2)

The most frequent booster in all three analysed sub-corpora was the modal
verb will. Will occurred 27 times in the life sciences sub-corpus and was used
26 times in both social sciences and humanities and physical sciences and
engineering abstracts. Palmer (1990: 134-135) notes the willingness to act on
behalf of the speaker expressed by the volitional will especially in combination
with I: “[o]ne can say that this is the will of volition with the implication that
volition associated with the speaker be taken as an undertaking to act”. Coates
emphasises that the difference between will expressing willingness and will
expressing intention is a subtle one as, and “by declaring his intention to do
such-and-such, a speaker is considered to have committed himself to performing
such-and-such” (Coates 1983: 174). Therefore, will used with the future
predictions about the usefulness, originality, benefit, value, novelty, etc. of the
proposed project communicates little doubt about the success of the proposed
research, as exemplified by (17)-(19):

(17) We will develop novel VEGF-B and VEGF-C-based gene therapy to treat
refractory angina and heart failure. (LS-1)

(18) I propose original, even revolutionary options to overcome these issues like the
use of solar cells. Thus, NECTAR will be the seed of a new generation of nuclear-
reaction experiments with unstable beams. (PE-7)

(19) I am convinced that the combination of these state-of-the-art approaches will yield
highly useful information for designing individualized approaches to improve RT
response in cancer patients. (LS-8)

As evident in the examples above, especially with personal pronouns I and
exclusive we, i.e. markers of self-mention, in the immediate context, will sounds
as a strong rhetorical guarantee of all the successful outcomes promised in the
abstract of the research proposal.
3.2.3 Self-mention

Self-mention markers were the second most frequently occurring stance markers in life sciences abstracts, and the third most frequent marker in social sciences and humanities and physical sciences and engineering abstracts (see Table 3 above). Having analysed stance and engagement markers in research articles across sixteen different disciplines, Ma (2021) found self-mention markers to be one of the main ways of emphasising authorial presence. Self-mention markers help accredit the propositions put forward in the text to the author, strengthening their authority. It is clear that in the abstracts of ERC funded life sciences projects, authors find it highly important to make themselves stand out as researchers. The fact that researchers used a higher number of self-mention markers than in the other two analysed sub-corpora might signal that life sciences as a science field is very competitive and so highlighting the role of individual researchers or teams of researchers as active contributors to the advancement of science could be seen as a strong device of rhetorical persuasion.

Surprisingly, social sciences and humanities scholars used self-mention to the lowest extent. In their diachronic study of interactive and interactional markers, Hyland and Jiang (2018) noticed a significant decrease of self-mention markers in applied linguistics in the most recent time period they analysed. On the other hand, they observed an increase of self-mention markers in sociology, so one reason for the trends of self-mention marker use we found could be related to rhetorical changes going on in individual disciplines. Another reason could be the tendency for scholars in some disciplines of social sciences and humanities to work not in large research groups but individually which is in stark contrast with hard sciences. As can be seen in Figure 2 below, it was the exclusive we which was dominating in all three sub-corpora implying that it was more common for the researchers to use personal pronouns while referring to themselves as a research group.

![Figure 2: Distribution of I and exclusive we and their forms in different science fields (per 1,000 words)](image-url)
ERC grants provide funding to individual researchers who are responsible for the project but who can also employ other researchers, which means that the projects are not expected to be carried out by a single person. Therefore, a significantly larger proportion of self-mention markers found refers to the teams of researchers rather than individual scholars. This, of course, is especially typical to life sciences and physical sciences and engineering fields where research is typically carried out in teams.

When self-mention markers are used in the abstracts, they typically refer to what the researchers have already done in the past (20), they are used to describe the aims of the project (21), to provide a description of the methodology or procedures of the project (22), or to indicate the urgency to investigate the proposed idea and the ultimate value the project will bring (23).

(20) **Using such an approach, we have already delineated a disease signature in a helper T cell population specific for MS.** (LS-3)

(21) **We aim at utilizing this new form of all-optical free electron control in a broad research program with five exciting objectives.** (PE-1)

(22) **Here, we combine genome engineering in stem cell-derived neurons and genetically altered mice with proteomic, high-resolution imaging and systems biology approaches <…>.** (LS-17)

(23) **Our overarching research question – What is the role of transport infrastructures in sustaining arctic communities? – is of urgent relevance on both theoretical and practical levels, and by addressing it we will contribute locally informed results to critical conversations about arctic futures.** (SH -24)

As has been mentioned above, in many of these contexts self-mention markers would be accompanied by attitude markers and boosters to emphasise the novelty, uniqueness, exceptionality, and urgency of the idea developed in the proposal, as well as the commitment of the principal investigator and their team to bring the promised value and benefit of the project.

### 3.2.4 Hedges

The effect that hedges have on propositions is described by Hyland (2008: 7) as withholding “complete commitment to a proposition, implying that a claim is based on the writer’s plausible reasoning rather than certain knowledge”. Both in research articles across different science fields analysed by Hyland (2005b) and in social sciences’ research article abstracts analysed by Alghazo et al. (2021) hedges were found to be the most frequently occurring stance marker. In the
analysed abstracts of research projects, however, hedges were the least frequently used markers and there was no statistically significant difference between the three science fields. The trend of low reliance on hedging may constitute one of the distinct features of ERC project abstracts. Academic texts in general might seem to traditionally exhibit modesty while making claims. Hedges are also used to protect the writer from making sweeping generalisations. In ERC project abstracts, on the other hand, hedges are not used as frequently, especially compared to other stance markers (see Table 3 above). This could suggest that the writers of the abstracts constructed their texts to show a high level of certainty in the propositions in order to increase the possibility of receiving a research grant.

Despite overall lower numbers of hedges, there were abstracts that were rather cautious in phrasing the possible outcomes of the projects, especially as far as some substantial future impact on the field or discipline is concerned.

(24) **If successful, we have created the instrumental and modelling foundation for a new paradigm in structural materials.** (PE-28)

(25) **Furthermore, they may pave the way for the future development of therapeutics to cure nerve injury or neurological disorders linked to synapse dysfunction.** (LS-17)

(26) **This could lead to a revision of how we study the early visual system, better color reproduction and better lighting systems.** (SH-2)

In (24)-(26) hedges make the optimism of the future impact of the proposed research a little bit downgraded. This could be a strategic choice of grant proposal authors to refrain from being overly optimistic about the future impact of the intended result.

Apart from the modal verbs *may, might, and could*, which were used to hedge the propositions, the most frequent hedge was the verb to *propose*. It is an interesting verb in that on the one hand it displays a certain confidence of the authors about what they are saying, as in order to propose something to academic community one has to have enough competence, knowledge and stamina. At the same time, *to propose* implies that the proposing scholars are opening a dialogue with the academic community, with peers in the field, waiting for their approval and acceptance of the proposed idea. This is exactly one of the rhetorical functions that hedges perform in academic discourse, open the door for a dialogue. This effect is exemplified in (27)-(28):
(27) We here propose three completely new and high-risk strategies to prevent CMD in large subsets of the population. (LS-7)

(28) To tackle this challenge, I propose focusing on the human adaptive and migration behavior of residents and other agents within one global framework <...>. (SH-22)

Other typical cases of hedging in grant proposal abstracts would include approximation of various types, for example, while presenting numbers and existing patterns (29) or the scope of the phenomenon (30):

(29) Yet, over the course of the following months or years, around 40% of the patients that underwent resection of the primary tumor with curative intention will relapse, generally in the form of metastatic disease. (LS-24)

(30) REBORN proposes rather unique toolboxes combining bionstructive biomaterials only based on human proteins obtained from the amniotic membrane. (PE-29)

Removing the approximators around, generally and rather would not lower the writer’s commitment to the proposition but make the information provided in the proposition definitive and exact.

3.3 Distribution of engagement markers in different science fields

In this section, the distribution of different engagement markers across the three sub-corpora analysed will be presented. As was pointed out earlier, engagement markers occurred far less frequently compared to stance markers.

<table>
<thead>
<tr>
<th>Stance markers</th>
<th>Life sciences</th>
<th>Physical sciences and engineering</th>
<th>Social sciences and humanities</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>raw /1,000</td>
<td>raw /1,000</td>
<td>raw /1,000</td>
<td></td>
</tr>
<tr>
<td>Reader pronouns</td>
<td>17</td>
<td>2.0</td>
<td>19</td>
<td>2.2</td>
</tr>
<tr>
<td>Questions</td>
<td>6</td>
<td>0.7</td>
<td>0</td>
<td>0.7</td>
</tr>
<tr>
<td>Appeals to shared knowledge</td>
<td>8</td>
<td>0.9</td>
<td>5</td>
<td>0.6</td>
</tr>
<tr>
<td>Personal asides</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>Directives</td>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
</tbody>
</table>

Table 5: Engagement markers by science field

As we can see from Table 5, reader pronouns were the most frequent type of engagement markers in all three sub-corpora, especially prevalent in social sciences and humanities abstracts. Questions as a rhetorical engagement strategy were more visible in the abstracts of social sciences and humanities, but they
did not occur at all in the abstracts of physical sciences and engineering. A few appeals to shared knowledge were found in all three sub-corpora, whereas two types of engagement markers from Hyland’s (2005b) model, personal asides and directives, did not occur at all in the analysed data.

### 3.3.1 Reader pronouns

The function of reader pronouns is described as a way of suggesting that the reader is “a member of the same discipline” (Hyland 2008: 10), therefore bringing them closer into the discussion. In the corpus of ERC project abstracts, reader pronouns were used to include the reader either as a member of the discipline (31) or as a member of the human race (32).

(31) *The identification of distinct TS and the mechanisms that regulate their identities and functions is critical for our understanding of tumor heterogeneity.* (LS-24)

(32) *Rapid advancements in machine learning technologies are transforming social and political life in ways that uniquely challenge how we live in relation to others.* (SH-21)

Employing *our* in (31), the author of the abstract appeals to the medical community of professionals highlighting the critical importance of the object under study. In (32) the statement becomes relevant to the reader because the *ways that uniquely challenge how we live in relation to others* are applicable to the reader as a member of the same society. Inclusive *we* with the references to human beings in general would frequently appear in the opening lines of the abstracts, where the background to the problem under investigation is typically discussed. The inclusive *we* with reference to the academic community would typically occur in the opening of the niche (33)-(34) as well as in the final sentences of the abstract describing the benefit and value the proposed project would bring to the scientific field and discipline (35):

(33) *Despite this importance to so many engineering processes, we still do not understand how their remarkable macroscopic rheological (deformation and flow) properties emerge out of the collective dynamics of their constituent microscopic substructures.* (PE-30)

(34) *In great contrast, we know surprisingly little about the pathways that direct the formation, transport, and assembly of the complex molecular machines that make up a functional presynapse.* (LS 17)
The project will provide a missing link in our understating of the recurrence of financial crises, thus pushing the boundaries of knowledge, renewing our understanding of financial crises and contributing to the ongoing search for greater financial stability. (SH-17)

In (33) and (34) the authors of the abstracts appeal to the collective responsibility of the academic community in their respective fields to address the gap that exists. The inclusive we serves as a sign of professional solidarity, as a link for the reader to feel included not into the discourse but also in the ultimate quest to address the gaps. As Harwood (2007: 32) mentions, this is one of the typical attempts of academic writers who seek to “get the reader onside so that they support the writer’s position”. This is especially relevant for grant proposals as having the reader who is also the evaluator of the proposal on your side is extremely important. A similar effect can be observed in those cases when the inclusive communal we is used to highlight the positive impact the proposed research will have on the whole academic community and on the discipline.

3.3.2 Questions

Questions add a dialogic dimension to the text, helping the writer lead the reader through their arguments. As a second most frequent engagement marker, questions seem to have an effect, which is at least sometimes sought after by the writers of ERC funded project abstracts. Hyland (2005b) found that 80 per cent of the questions identified in the analysis were rhetorical questions, which were used to present the writer’s opinion. The situation was different in the corpus of this study as all of the questions either presented the main problem that the project deals with or specific research questions as illustrated in (36).

Our overarching research question – What is the role of transport infrastructures in sustaining arctic communities? (SH-24)

As can be seen in Table 5, questions did not occur in physical sciences and engineering abstracts. McGrath and Kuteeva (2012) reported similar results, as they did not identify any questions in pure mathematics research articles. Thus, it seems that the traditionally more hard sciences do not use questions to create a dialogue with the reader. Questions did occur, though, in life sciences and social sciences and humanities sub-corpora. Similar to reader pronouns, questions include readers into the discourse engaging them in an inaudible dialogue. It is not surprising, then, that social sciences and humanities disciplines, being generally much more discursive than the hard sciences, employ the rhetorical technique of question raising to the larger extent than their colleagues in the hard sciences.
3.3.3 Appeals to shared knowledge, personal asides and directives

Writers use appeals to shared knowledge to signal that a proposition should be either agreed upon by the reader or at least familiar to them. As shown in Table 5, these markers occurred only a handful of times across the whole corpus. Other studies, however, found appeals to shared knowledge to occur more frequently. They were found to be among the most frequent engagement markers by Luan and Zhang (2018) and Keramati et al. (2019), in their studies of linguistics research articles. These findings may suggest that writers could be keener on using appeals to shared knowledge in lengthier texts.

Both personal asides and directives did not occur in the corpus of ERC funded project abstracts. This is probably because of the genre of the abstract as it is hard to imagine abstract to use personal asides, which halt the flow of the text to offer a writer’s personal comment. The same can be said about directives, which can instruct the reader to stop and think about something, to look at some specific information, like a chart or a reference. Thus, in this case, it is the genre of the abstract which precludes the use of these markers irrespective of the science field.

4 Conclusions

This paper aimed to identify frequency and distribution trends of stance and engagement markers in ERC funded project abstracts. The results revealed that ERC funded project abstracts used about ten times more stance markers than engagement markers. This shows that writers of the analysed texts found building their authorial persona and standing out as competent researchers much more important than engaging their reader and leading them through the text. This is hardly surprising considering the length of abstracts, which allows only the most essential information to be included, as well as the communicative purpose of abstracts, which is to convince the reader to fund the research proposal.

Attitude markers turned out to be the most frequent stance resources used by principal investigators in all three science fields to communicate novelty, value, uniqueness, competitiveness, significance of the proposed research. Boosters were also important and frequently used to strengthen the attitude markers as well as to communicate the readiness of the principal investigator and their teams to carry out the proposed research successfully. Hedges were one of the least frequently used rhetorical devices in all three analysed fields. Despite the prevalence of this stance marker in other genres, such as research articles, the competitive nature of grant proposal abstracts apparently prevented the authors from mitigating their propositions to a larger extent. Finally, the dominating type of self-mention was the exclusive we, signalling the importance of team work in big projects of an international scale.
In terms of engagement marker use, some of the categories outlined in Hyland’s (2005b) framework did not occur at all in the analysed corpus. Since Hyland’s framework was based on research articles the genre difference must have resulted in the absence of personal asides and directives which would typically be found in lengthier genres. Appeals to shared knowledge were also scarce, while reader pronouns and questions were used but to a slightly different extent in all three analysed sub-corpora.

The study also suggests that there are differences between the use of stance and engagement markers in social sciences and humanities, life sciences, and physical sciences and engineering fields. The use of stance markers was most pronounced in the abstracts of life sciences, just as the use of self-mention markers. This may signal that it is more important to stand out as individual or teams of scientists in this field, to indicate the presence of the author as a crucial figure to carry out the research successfully and to communicate a very strong stance. The use of engagement markers revealed that social sciences and humanities scholars use these devices to the largest extent, which in turn suggests that more focus is put onto the scientific community, guiding the reader through the text, making sure that the reader is on the same wavelength as the writer.

In the future it would be important and interesting to investigate a larger sample of empirical data, perhaps focusing on different levels of expertise of the authors. A comparative analysis of successful and unsuccessful research grant proposals alongside the reviewer comments would also be a useful addition to the growing body of studies on competitive research funding discourse from both educational and the effective discourse construction perspectives.

Notes
1 This paper is partly based on an unpublished academic thesis written by the first author.

References


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