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Milica Rodić*
Faculty of Modern Languages,
Ruprecht-Karls University Heidelberg
Germany
https://orcid.org/0009-0007-9198-7494

THE OMNIPRESENT AUTHOR: DISTRIBUTION OF MARKERS OF AUTHORIAL PRESENCE IN SCIENTIFIC ARTICLES IN LINGUISTICS, ECONOMICS, AND TECHNOLOGY WRITTEN IN ENGLISH, SERBIAN, AND GERMAN**

Abstract
Across cultures, authors use a variety of linguistic strategies to implement their voice into their academic texts, sometimes explicitly marking their presence through personal pronouns. Based on a corpus of 124 research articles written by native speakers in English, Serbian, and German, in the fields of linguistics, economics, and technology, this study investigates the quantitative and qualitative uses of authorial presence markers across these communities. The quantitative results show that these markers are most frequently used in the English sub-corpus, followed by the Serbian and German sub-corpora. Moreover, they are used most frequently in linguistics, and least in technology, while the economics sub-corpus in English accounts for almost half of the markers in the entire corpus. These differences are further elaborated in a qualitative analysis discussing their context of use.

Key words: authorial stance, authorial presence, self-mention, scientific writing, English, Serbian, German

* mrodic19@gmail.com
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1. Introduction

For a very long time, the language of scientific articles was considered to be one characterised exclusively by objectivity, impartiality, clarity, and precision, irrespective of the scientific field or discipline it deals with. The purpose of a scientific article, as such, was to act as a crucial scientific medium describing new discoveries attained through research and experiments and contributing to the scientific discipline, as well as to the reputation of the scientists engaged in it (Hyland 1996: 252). However, the characteristic style of scientific writing had a tendency to put to the forefront solely the information on the research being conducted, rather than the information about the researchers conducting it, or their involvement in the research process. Indeed, scientific articles were often written as "a series of impersonal statements of fact which add up to the truth" (Hyland 1994: 239), much like it is shown in example (1) below, which illustrates the objective and impersonal style of scientific writing.

(1) For this study, the FCCVD growth time *was varied* to achieve different heights of CNT arrays. The HOPG substrates *were first coated* with a thin film of SiO2 (<200 nm) as a buffer layer. The SiO2 oxide buffer layer *was deposited* using microwave plasma CVD, where the silica source was hexamethyldisiloxane, and the procedure was established earlier. The resulting samples *were analyzed* by scanning electron microscopy (SEM), transmission electron microscopy (TEM), and laser flash analysis (LFA).

Example (1) illustrates the view of academic writing as "purely empirical and objective", mirroring the nature of academic research itself, which is "therefore best presented as if human agency was not part of the process" (Hyland 2001: 208). The impersonality and objectivity of expression are intended to contribute to scholarly persuasion, authority, and credibility of the claims being made.

However, in an alternative view of academic writing, writers have abandoned their roles as neutral and objective conveyors of their objective results, utilising only impersonal means of expression (Ivanič 1998: 1). On the contrary, writers are seen as inevitably bringing into their writing their subjective attitudes and evaluations, personal investment and commitment, as well as expertise and experiences – personal and professional, contributing to the creation of their academic, scholarly and professional

identity. Additionally, their presence in the text corresponds to the claims of authorship in academic writing, thereby adding to the expression of authority and credibility, and signifying that the "responsibility for the truth of an assertion [lays] heavily on shoulders of the authors" (Hyland 2002: 1110).

Additionally, the choice of the means of expression the writer utilises in academic writing is not only dependent on their personal preferences, but also on the confines of social, cultural, linguistic, disciplinary, and genre conventions. Therefore, in negotiating appropriate ways of communicating within this interplay of different factors, even in a formal setting such as the space of an academic article, authorial identity is still characterized by "plurality, fluidity and complexity" (Ivanič 1998: 10). The writer's identity is shaped in the text by their lexical, grammatical, rhetorical, syntactic, and semantic choices (Ivanič 1994, 1998; Clark and Ivanič 1997), which reflect the conventions within different *academic discourse communities* (Ivanič 1998: 78) – defined as social groups affiliated to academic disciplines – regarding the functions of authorial presence in the text denoting agency in the research and the claims made. Different scientific communities employ different conventions in writing, using different linguistic means and resources to form their argumentation (Hyland 1998, 2001, 2002), dependent on different "social structures and professional objectives" (Hyland 1998: 157), as well as "particular 'knowledge-making principles': particular objects of study, bodies of knowledge, values, beliefs and practices" (Ivanič 1998: 282).

One manner in which authors can express their academic persona and identity in the text overtly is through the notion of *stance* – "a cluster of attitudes, values, goals, and commitments" (Boucher 2018: 521), which presents the writer's textual *voice* or community-recognised personality (Hyland 2012: 40). Stance refers to the ways in which writers insert themselves into their discourse to express their personal or professional attitude, judgement, opinions and evaluation towards both the content and the audience of the text (Hyland and Tse 2004: 156, Hyland 2012: 40). The notion of stance therefore relates to both the notions of credibility and authority, as well as fluidity and plurality, as "[t]aking a stance and demonstrating confidence clearly implies that the writer is a distinctive, individual creator with a firm position and rights to ownership of his or her perspectives and text, but this kind of identity is not shared by all cultures" (Hyland 2002: 1110). While certain cultures, linguistic and disciplinary,

may prefer different modes of expressing authorial identity (such as a more covert one which diminishes the role of the author), this study will focus on a more overt expression of authorial stance through markers of authorial self-mention.

2. Authorial stance and authorial self-mention

In the text of a scientific article, authors are simultaneously "trying to set out a claim, comment on its truth, establish solidarity and represent their credibility" (Hyland 2005b: 177), while expressing their point of view, attitude, and opinion. The authors aim to do so through their language, which acts as "a means of expressing social identity" (Ivanič 1998: 38), having at their disposal a multitude of available resources (Ivanič 1998: 10), consisting of different linguistic forms performing many different functions. However, one notion which may encompass them all can be that of *stance*, consisting of "a heterogenous array of cohesive and interpersonal features" (Hyland and Tse 2004: 157), manners in which authors denote their opinions and evaluations and inject their academic persona into the text of a scientific article. Therefore, stance can be seen as a textual manifestation of the speaker's identity and the way the writer's thoughts, attitudes, perceptions, and opinions are projected into the text.

While stance can be expressed in many ways in academic writing, the most overt and explicit expression of stance is through the use of first-person pronoun (Hyland 2001; Ivanič 1998; Kuo 1999; Tang & John 1999). By making their presence explicitly visible to their readers, through self-mention markers (Hyland 2012: 183), writers construct a notion of self in the text in the most explicit way, putting forth "a writer's socially defined persona" (Hyland 1999: 101), thereby explicitly presenting their authorial identity in the text. By inserting themselves into their text, the writers are actively breaking free of their role as simple narrators and becoming interlocutors in a dialogue with their audience and constantly negotiating, adopting, and inventing their identity in their writing (Tang & John 1999: 24).

While the exact opposite of the subjective manner of writing, containing passive and impersonal constructions (Grabe & Kaplan 1996: 159; Tepavčević 2015: 182) is seen as one of the most salient characteristics of scientific writing, the subjective style of writing through authorial self-mention has several functions crucial for this genre of writing.

Firstly, putting a personal pronoun at the forefront clearly announces the writer in the text (Hyland 2012: 128) and indicates the author's personal opinion and attitude, which is arguably the strongest form of self-representation. It is also directly related to the notion of evidentiality, as it indicates the source of the claim being made, and attributes it directly to the author.

Furthermore, the use of self-mention markers shows direct involvement of the author in the research process, emphasises their role in the research and their contribution to the field, which separates their work from that of others (Hyland 2005a: 148). This aids the promotion of "a competent scholarly identity" and scientific reputation and enables the authors to "gain accreditation for their research claims" (Hyland & Tse 2004: 172).

Finally, the use of first-person pronouns emphatically "[stamps] a personal authority onto one's views" (Hyland 2012: 183) and this may be seen as contributing to an assertive and confident stance in getting behind one's views in the role of a "[knowledge-maker]" (Ivanič 1998: 308). The display of authority and confidence leaves the readers in no doubt about their stance (Hyland 2002: 1093), which is "a key element of successful academic writing" (Hyland 2002: 1094). However, subjectivity may also be seen as adding to the attenuation of claims and therefore conveying uncertainty and indeterminacy, which is a stark contrast to impersonal objective reporting that leaves no room for ambiguity (Tepavčević 2015: 182) and is therefore believed to increase persuasion, authority, and credibility of the author. Subjectivity might rather indicate more certainty and taking of responsibility for the claim, "displaying confidence in their evaluations and commitment to their ideas" (Hyland 2002: 1091), but still leaving the claim "open to the reader's judgement" (Hyland 1998: 182). In this way, authorial self-mention is meant to "show respect for the reader's alternative opinion and invite the reader to become involved in the communicative situation" (Martín-Martín 2008: 138). Therefore, while authorial self-mention is an important display of competent academic identity and expertise, it can also suggest that "in other hands, things could have been done differently" (Hyland 2012: 84), therefore being a vital interpersonal strategy in academic discourse.

Bearing in mind these functions, markers of authorial self-mention in previous research, as well as this corpus, show a wide variety of formal expressions, evidenced in the three usages below:

(I) First-person pronouns (*I/we*) followed by verbs of cognition (*think, believe*) or epistemic verbs (*suppose, suggest*) are used to indicate that what the authors are stating is their personal/ subjective opinion: *we believe, we assume.* These expressions can also have a hedging function (Kuo 1999: 133) or alternatively, serve to convey certainty and "assurance of conviction" (Hyland 2001: 221), thereby displaying "both individuality and community-derived authority" (Barton 1993: 750).

(II) First-person pronouns (*I/we*) followed by verbs of performance (*conduct, perform*) are used to indicate that the authors are closely involved in the experimental process, by "explaining what was done" (Kuo 1999: 132). This use contrasts the use of the passive voice – *we characterize, we pursue, we use* – as the emphasis here is on the scientists who performed the experiment and made subsequent observations and conclusions. This use is referred to as "exclusive we" (Kuo 1999: 132), and it is used by authors to explain the conducting of investigation, as well as to propose a theory or approach, state a goal or purpose, show results or findings, show contribution to research, compare and express expectations, and overtly emphasise the presence and the role of the authors in the research. Additionally, this use has an organisational function in stating the direction of the research (Hyland 2012: 138). It is meant to emphasise the author's unique role in the research, as well as alignment with the performed procedure (Hyland 2012: 138) and to put an emphasis on the personal choices made ("in other hands, things could have been done differently") (Hyland 2002: 1102).

(III) Expressions containing possessive determiners are used to express the author's personal doubt and direct involvement (see also Salager-Meyer 1994: 155) and to express the viewpoint and perspective of the authors (Biber et al. 1999: 855): *our opinion; our study, our data, our research, our estimation, in our case.* This use is supposed „to highlight what is proposed by writers themselves in the research, and emphasise writers' unique contributions", as well as to explain what was done, show results and findings, and compare approaches or opinions (Kuo 1999: 135) while marking "the writer's responsibility for [the claims] and property rights over them" (Ivanič 1998: 308).

3. Methodology and Research Questions

The aim of this research is to conduct a cross-linguistic and cross-disciplinary empirical study and investigate the quantitative and qualitative uses of authorial presence (self-mention) markers in academic articles. To do so, it adopts a corpus-based approach, drawing on data from a corpus of 124 research articles written in three languages – English, Serbian, and German, and in three scientific disciplines – linguistics, economics, and technology, by native speakers, investigating the use of personal pronouns and possessive determiners denoting authorial stance in context.

The corpus data for this research encompasses academic articles published in national or international journals between 2010 and 2020, producing an electronic corpus of 535,433 words and divided into nine sub-corpora, three for each discipline and three for each language.

These nine sub-corpora were analysed both quantitatively, in order to establish the frequency of use of self-mention markers in each sub-corpus, as well as qualitatively, scrutinising their specific pragmatic function in each context of use. Thus, the purpose of this research is both qualitative and quantitative: it quantitatively investigates the frequency of markers of self-mention in these three scientific disciplines and three languages, in order to answer how these markers are distributed across these three languages and humanistic, social or exact sciences, and it qualitatively analyses the context and function of their usage, so as to investigate the potential interpretation of these markers based on the linguistic and situational context within these articles. The programme used for the analysis was MAXQDA – a software tool for qualitative and quantitative analysis.

From a quantitative perspective, it can be hypothesised that more markers of authorial self-mention will be used in social and humanistic sciences (i.e., linguistics and economics in this research) than in exact sciences (technology in this research), as "rhetorical practices are inextricably related to the purposes of the disciplines" (Hyland 2005b: 187). From a qualitative perspective, it can be hypothesised that markers of authorial self-mention fall into the three usages mentioned in the chapter above, consistently with data found in previous research, which will be elaborated in the next chapter.

4. Results

Following the quantitative analysis of data, it can be deduced that in the corpus of data used for this research, markers of authorial self-mention are distributed as shown below in Figure 1.

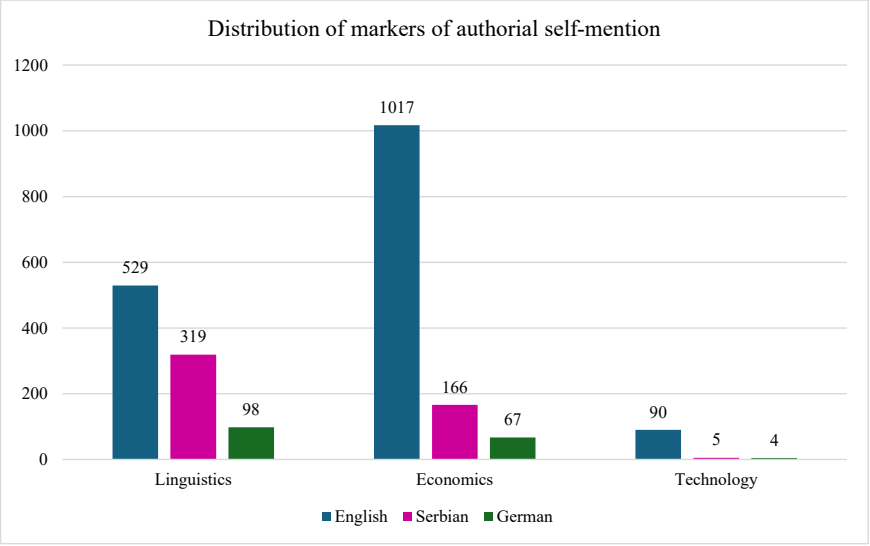

Figure 1. Distribution of markers of authorial self-mention in the corpus

Figure 1 shows that markers of authorial self-mention are used most frequently in the articles written in English in all three disciplines, followed by Serbian and finally German, in terms of absolute frequencies. Markers of authorial self-mention are overall most frequently used in the linguistics sub-corpus, and least frequently in the technology sub-corpus. However, articles in the field of economics written in English feature the highest frequency of all sub-corpora, accounting for almost half of all the markers of authorial self-mention found in the entire corpus. These quantitative results can be confirmed with proportionally calculated normalised frequencies of these markers per 1,000 words, shown in Figure 2 below.

	Linguistics	Economics	Technology
English	6.3	12	1.3
Serbian	5	2.9	0.1
German	1.5	0.96	0.06

Figure 2. Normalised frequencies of authorial presence markers per 1,000 words

Figures 1 and 2 confirm that markers of authorial self-mention are indeed used more frequently in humanistic and social sciences than in exact sciences in this corpus. These cross-disciplinary, as well as further cross-linguistic differences can be elaborated through a qualitative analysis of their context of use and rhetorical functions.

The qualitative analysis will further focus on explicit manifestations of authorial presence through the use of first-person pronouns and possessive determiners (*I, me, mine*, exclusive *we, us, our, ours*) in disciplinary sub-corpora, followed by a closer look into these markers in all three languages. The so-called "inclusive we" (Kuo 1999: 126), used to refer to an entity that is broader than that of authors is not included in the analysis.

4.1 Linguistics

Firstly, in the linguistics sub-corpus, a combination of all three usages mentioned above can be noticed in the examples (2) – (5), and these examples can often be found in clusters, as illustrated by example (2). Especially in example (2), in the English sub-corpus, markers of self-mention are used to denote the actions – experiments, analyses – the author(s) of the papers conducted, showing they are agents explicitly involved in the research process (*we pursue, we characterize*). This is also done with the accusative case of the personal pronoun in the marker *allows us to describe*, in which the authors are fulfilling the semantic role of patients of the clause, but their agency in the research process is still expressed. Additionally, these markers are also used to denote the assumptions the authors hold in the most overt way, through the use of verbs of cognition (*we believe*), indicating that the claim that follows is their opinion. Finally, possessive determiners are used to show the direct involvement of the authors in the

research conducted by clearly indicating the belonging of these objects to the authors of the articles (*our study, our conversation data*). Additionally, they can also indicate that these inanimate objects and the findings which proceed therefrom are characteristic solely of these objects and none other. This means that the results could be reproduced if one were to repeat the steps of the investigation or use the same data set, but they should be seen as pertaining to this set.

(2) In our study, we pursue a mixed analytic approach that combines insights from corpus-based syntactic analysis with interactional or discourse methods, which we believe best capitalises on the online, performance data of our conversation data. We start with a close syntactic analysis of the verbal patterns during actual conversations produced by the persons residing in assisted living facilities who have diagnoses of dementia. This allows us to describe two levels of linguistic production: First, we characterise their linguistic behavior in terms of grammatical structures. In our analysis, the transitivity pattern types and frequencies are compared to patterns of usage recorded in benchmark corpus studies that capture the syntactic patterns and errors of (presumably) non-impaired persons (Biber et al. 1999). [ENG, LING]

The second usage (II) mentioned above, referring to the actions performed as part of the research, is the most prominent one in all three language sub-corpora, and its prominence in the construction (first-person plural *we* + cognitive/perception/performance verb) can be said to be continually generated by speakers in academic contexts and has therefore become pragmaticalised in these contexts. In these constructions, both the form and the content carry the message as a way of piggybacking meaning (Levinson 2000: 6), clearly showing the presence of the author(s) in the research process as an agent. By explaining the procedure (Hyland 2012: 138), the authors show the alignment with the performed procedure (Hyland 2012: 139). The use of self-mention markers "clearly demarcates the writer's role in the research" (Hyland 2005b: 181). Additionally, the explanation of the research procedure is a direct opposite of the use of passive voice illustrated in example (1).

(3) We have already introduced BUT-JUSTIFICATIONS in section 2.3. Here we make a finer distinction. While we absolutely maintain that J-BUTS seem to address either the institutional role of 'good

> student' or the more generic role of 'good person', and that they operate as means of self-enhancement, whereas ACCOUNTS orient to offence mitigation, we need to make a refinement to our earlier (Davies et al., 2007) notion of J-BUTS, namely that we now wish to distinguish between two distinct types: […]

As already mentioned, this construction – presenting the author(s) as agent(s) in the research process – is not only connected to the description of the order of the experiment, but also the structuring of the article, as first-person is often used for metapragmatic organisational purposes within the article, and meant to guide the reader through the article, as illustrated in example (3). This use corresponds to Hyland's cluster of stating a goal/purpose (2012: 137), as these markers state the direction of the research and schematic structure of the argument, therefore having an organisational purpose (Hyland 2012: 138) in the text.

First-person singular pronoun is used in only one of ten papers in the English sub-corpus, denoting actions conducted by the author (*I have utilised, I discussed*), their assumptions (*I suspect that, I hope that*) and belonging of inanimate objects through possessive determiners (*my own research, my research question, my study*), thereby showing their overt and sole responsibility for the research. Even in single-authored papers, first-person plural is used more commonly as a marker of self-mention, as also noted by Kuo (1999) and Hyland (2002), as "an intention to reduce personal attributions" (Kuo 1999: 125).

In the Serbian sub-corpus, the markers of authorial self-mention are not as explicit, as they are expressed through verb forms marked by inflection for first-person plural. The personal pronoun *ja/mi* 'I/we' for first-person singular and plural, respectively, can be omitted in Serbian, as the verb inflection at the end is used to mark person and number. Example (4) below also illustrates the prominent second (II) usage of markers of self-mention, describing the actions conducted during the research and the aims of the researchers (*preduzeli smo ovo istraživanje* 'we undertook this research'*, želeli smo da ispitamo* 'we wanted to examine').

> (4) S ciljem da ispitamo intonaciju upitnih iskaza u srpskom jeziku – preduzeli smo ovo istraživanje. Posebno smo želeli da ispitamo da li iskazi u kojima je upitnost izražena leksičko-gramatičkim sredstvima imaju specifičnu upitnu intonaciju koju odlikuju uzlazni krajevi intonacionih kontura ili su intonacione konture ovih

iskaza, zapravo, slične konturama obaveštajnih iskaza. [SRB, LING]

(5) 'With the aim of examining the intonation of interrogative statements in the Serbian language – we undertook this research. In particular, we wanted to examine whether the statements in which interrogativeness is expressed by lexical-grammatical means have a specific interrogative intonation characterized by the rising ends of the intonation contours, or whether the intonation contours of these statements are, in fact, similar to the contours of intelligence statements.'

The first usage (I), denoting the authors' assumptions, is also present in the corpus: *mišljenja smo* ('we are of the opinion'), *smatramo* ('we think'), *pretpostavljamo* ('we assume'), *verujemo* ('we believe'), as well as the third usage concerning the use of possessive determiner followed by an inanimate noun: *naše je mišljenje* ('our opinion is), *naše istraživanje* ('our research'), *naši ispitanici* ('our respondents'), *naš cilj* ('our goal'). Overtly elaborating an argument (Hyland 2012: 139) is potentially the most self-assertive use of self-mention (Hyland 2012: 140), as this "explicitly foregrounds his or her distinctive involvement in the paper and commitment to a position: it is the most explicit feature of positioning and the adoption of a confident, assertive identity" (Hyland 2012: 141), which might indicate that the first usage does not indeed have a hedging and attenuating function. However, the attenuating function can be seen in the combination of self-mention markers with the modal verb *moći* ('can'), indicating the authors' tentative assumptions: *možemo reći* ('we can say'), *mogli bismo dodati* ('we could add'), or lexical verbs denoting the intentions behind their research: *pokušali smo da istražimo* ('we tried to research'), *pokušali smo da odgovorimo na pitanje* ('we tried to answer the question'), *nastojaćemo da pokažemo* ('we will strive to show').

Finally, the first-person pronoun *mi* 'we' in Serbian is also evident in its dative (*nama, nam*) and accusative form (*nas*), in examples such as: *cilj nam je da ispitamo i da utvrdimo* ('our goal is to question and establish'), the dative form *nam* marks the subject of the clause as a dative experiencer (Piper et al. 2005: 179), *pokazuje nam* ('shows us'), *govori nam* ('tells us'), in which the authors function as indirect objects in dative, as well as in *interesuje nas* ('interests us') in which the author functions as a semantic subject marked by the accusative, as the carrier of a mental state (Piper et al. 2005: 195).

Similarly to the English sub-corpus, even in single-authored papers, the first-person plural is still used more often. There is one single marker in which first person singular is used to denote the author's action in the entire corpus: *razmotriću* ('I will consider'). This corresponds to findings in literature on the general preference in Slavic academic discourse towards using the first-person plural form *mi* to indicate that the author is part of a community and not an individual, thereby exhibiting their academic modesty and humility (Blagojević 2011: 209).

Markers of authorial self-mention are much less frequent in the German sub-corpus, used to denote the processes conducted as part of the research (*wir betrachten* 'we consider'), as well as their personal assumptions, and to highlight that their findings might only be characteristic of their own results and their own presuppositions, as well as to directly claim ownership of them through the use of possessive determiners, as illustrated in examples (5) and (6).

(6) Wir teilen diesen Standpunkt nicht, was allerdings nicht heißt, dass wir Wörter, die quasi synonym sind, als austauschbar betrachten. [DE, LING]

(7) 'We do not share this point of view, but that does not mean that we consider words that are quasi-synonymous to be interchangeable.'

(8) In unseren Hypothesen waren wir davon ausgegangen, dass bei Kontrolle der Qualität des deutschsprachigen Inputs der Effekt des quantitativen Inputs schwächer wird. [DE, LING]

(9) 'In our hypotheses we assumed that if the quality of the German-language input was controlled, the effect of the quantitative input would be weaker.'

The first-person singular is used to describe the actions undertaken by one author: *analysiere ich* ('I analyse'), *ich untersuche* ('I research/analyse'), *habe ich [...] untersucht* ('I researched'), implying that the agency, as well as the responsibility, is individual.

4.2 Economics

The English sub-corpus of articles written in the field of economics accounts for almost half (44%) of all the markers of authorial self-mention in the entire corpus. The majority of the markers contain first-person plural pronouns referring to the processes the authors conduct as a part of their

study (*we use, we control for*), as illustrated in example (7). Additionally, example (7) illustrates the use of possessive determiners and inanimate nouns, expressing authors' viewpoints and indicating their contributions and responsibility (*our estimation*).

(10) Our estimation combines evidence from aggregate time series and a panel of 22 U.S. cities for the years 1978-2009. We estimate the local effects of agglomeration using both data sets. The panel data contain information on land rents and the necessary inputs to a conventional measure of city-specific TFP, in which we control for heterogeneity in the work force following Ciccone and Peri (2006). We use aggregate time-series data to estimate other model parameters. Some of these parameters enter into our measurement of TFP and some we use, along with our estimate of the size of agglomeration effects, to measure the impact of agglomeration on growth. Our estimation accounts for the sampling uncertainty in both the micro- and macrodata. [ENG, ECON]

Some examples include the use of the first-person pronoun with the epistemic verb denoting the author's opinions and assumptions: *we infer, we assume, we hypothesize, we estimate*.

First-person plural pronouns can also be found in the accusative case: *provided us with, allows us to analyse, do not interest us, it tells us little,* in which the authors are expressed as fulfilling the semantic role of patients of the clause and are therefore somewhat deemphasised, but these clauses still express their stance in the research process.

Markers of first-person singular can also be found in this sub-corpus to denote research processes, albeit much less frequently than first-person plural, and they indicate singular agency and responsibility for the research: *I analyze, I propose, I specify and estimate, I consider, I suggest, I assume*, also expressed through the use of possessive determiners: *my model, my framework, my sample, my results*.

When it comes to the Serbian sub-corpus, the second and third usages are used most frequently to denote the procedures conducted for the research, as well as possessive determiners and inanimate nouns, denoting the contributions and responsibility of the authors, as illustrated in example (8).

(11) Primijenili smo isti oblik MCI u našem istraživanju. Za baznu godinu koristili smo 2010. godinu, tj. prosjek za domaću kamatnu stopu i REER za ovu godinu, jer se domaći indeks industrijske proizvodnje računa za istu baznu godinu. [SRB, ECON]

(12) 'We applied the same form of MCI in our research. We used 2010 as the base year, i.e. average for the domestic interest rate and REER for this year, because the domestic index of industrial production is calculated for the same base year.' [SRB, ECON]

There are only a few examples in which this strategy is used to indicate the opinion of the authors, and they all have the same form: *mišljenja smo* ('we are of the opinion'). Tentative assumptions are also made by the authors in combination with the modal verb *moći*: *možemo zaklučiti* ('we can conclude'), *možemo reći* ('we can say'), *možemo doći do nekoliko zaključaka* ('we can reach several conclusions'), *mogli bismo očekivati* ('we could expect').

Similarly to the linguistics sub-corpus, the personal pronoun *mi* can also be found in its dative form nam: *ovo nam govori* ('this tells us'), *ovaj odnos nam pokazuje* ('this relationship tells us'), in which the authors are seen as indirect objects as the action is directed towards them (Piper et al. 2005: 182), while still expressing their viewpoint.

In the German sub-corpus, only first-person plural markers can be found, used to describe processes conducted by authors for the purpose of conducting their research: *wir betrachten* ('we consider'), *verwenden wir* ('we use'), *zeigen wir* ('we show'), *haben wir [...] durchgeführt* ('we carried out [...]'), as well as to indicate the authors' assumptions through lexical verbs: *wir nehmen an, dass* ('we assume that'), *wir unterstellen, dass* ('we assume that').

Additionally, authorial presence is expressed through possessive determiners *unser(e/es/en/em),* followed by an inanimate noun. These pronouns are meant to claim responsibility for the inanimate noun, as illustrated in example (9).

(13) Auf angebotsseitiger Ebene legt unsere Studie den Fokus auf die innereuropäischen Migrationsströme. Der Brexit und eine damit verbundene restriktivere britische Immi-grationspolitik könnte migrationswillige EU-Bürger dazu bringen, verstärkt nach Deutschland zu ziehen. Unser Beitrag schätzte diesen Umlenkungseffekt für den Zeitraum bis 2025 auf der Basis einer Analyse

der früheren Migrationsströme voraus (Diaspora-Ansatz). Eine Brexit-bedingte Erhöhung der EU-Nettomigration nach Deutschland um jährlich 10 000 bis 20 000 Personen ist nach unserer Einschätzung für die nächsten fünf bis zehn Jahre durchaus realistisch. [DE, ECON]

(14) 'On the supply side level, our study focuses on intra-European migration flows. Brexit and the associated more restrictive British immigration policy could encourage EU citizens willing to migrate to increasingly move to Germany. Our contribution estimated this diversion effect for the period up to 2025 based on an analysis of previous migration flows (diaspora approach). In our opinion, a Brexit-related increase in EU net migration to Germany by 10,000 to 20,000 people per year is quite realistic for the next five to ten years.'

The last marker in example (9) denotes the author's opinion through the use of a possessive determiner – nach *unserer Einschätzung* ('in our opinion'), clearly demarcating their responsibility for the claim made, and therefore explicitly stating their position and stance.

4.3 Technology

As can be clearly seen from Figure 1, markers of authorial self-mention are completely neglected in the entire corpus of technology, and especially in the Serbian and the German sub-corpus, unlike the linguistics and economics corpus.

In the English sub-corpus, the majority of examples includes the use of the first-person plural pronoun *we* denoting actions performed as part of the research, as the research and the article progress: *we focus on, we present, we argue, we describe, we examine*, as illustrated in example (10). In addition, it can also be said that the present tense is used as an organisational metadiscoursal marker to denote what will be discussed as part of the article: *we now proceed with, we now summarise.*

(15) Up to 200 ns after the arrival of the detonation front, we observed a −4 power law consistent with the initial pore structure. [ENG, TECH]

Additionally, first-person plural pronoun *we* is also used to express the authors' assumptions: *we assume, we believe*. Finally, possessive determiners followed by inanimate nouns denote the belonging of these notions to the authors and thereby imply their direct responsibility for them: *our calculations, our results, our experimental data, our investigations, our opinion, our belief*. These markers also show that the results obtained are characteristic solely of their work, their data, and their measurements.

Conversely, the Serbian and the German sub-corpus of technology articles yielded only 6 and 4 markers of authorial self-mention, respectively. In Serbian, these examples include the use of possessive determiners: *u našem ogledu* ('in our experiment'), *u našem prethodnom radu* ('in our previous paper'), and an attenuated conclusion reached by the authors: *možemo zaključiti* ('we can conclude'). In German, these examples include the use of possessive determiners: *in unserem Fall* ('in our case'), *in unseren Experimenten* ('in our experiments'), used to denote belonging, and also to indicate that what is valid for this particular case and experiment, might not be valid in another case, or another experiment. Finally, two examples can be found explicitly denoting agency in the actions done in the research via the *von*-phrase with the personal pronoun in dative (Duden 2022: 380): *von uns vermessenen* ('measured by us'), *von uns synthetisierten Membranen* ('membranes synthesised by us').

5. Discussion and Conclusions

Based on quantitative and qualitative results presented above, it can be deduced that markers of authorial stance are used for the same purpose in all nine sub-corpora – to indicate authorial agency in the research explicitly, their responsibility for the claims made, as well as the authors' assumptions and opinions, corresponding to the three usages denoted above. Furthermore, it can also be deduced that the use of markers of authorial stance differs both cross-linguistically and cross-disciplinarily, as each discipline and language have their own preferred ways of expressing claims and the use of these markers reflects the communicative purpose and the syntax of scientific discourse in the argumentation of the author's claims.

On the one hand, the nature of research as belonging to soft sciences (humanities and social sciences), or hard (exact) sciences is reflected in

different linguistic expressions of authorial stance. While in hard sciences, the procedures and numbers may speak for themselves, in soft sciences, authors have to overtly indicate how a claim should be interpreted, thereby emphasising their role in the research and data interpretation. Therefore, authorial involvement is much more explicit in the soft sciences (reflected in much greater use of first-person pronouns), which was also found in Hyland (2001). This means that authors/researchers tend to favour a more involved and personalised style of writing and have a more prominent and visible role in the soft sciences, confirming the research hypothesis. This may be due to the fact that in humanities and social sciences, authors "link themselves with their ideas more explicitly rather than subsume their voice to that of nature" (Hyland 2012: 129). As soft sciences are generally more interpretative, and less precisely measurable and clear-cut (Hyland 2002: 1098, Hyland 2012: 18), self-mention can help construct an identity as "an intelligent, credible and engaging colleague" (Hyland 2001: 216, Hyland 2012: 18) in order to persuade the audience and gain community's approval. While Myers (1989: 6) claims that "any attribution of a statement to a person weakens it", explicit attribution of stance can, in fact, indicate responsibility for the claims and uniqueness in an author's approach, signalling certainty and reinforcing statements. Indeed, in this corpus, markers of self-mention denote personal responsibility being attributed to both the research procedure, and the findings, opinions, and attitudes obtained, and serve to „strongly identify oneself with a particular argument and to gain credit for one's individual perspective of research decisions" (Hyland 2001: 217).

On the other hand, hard sciences tend to resort to more objective and depersonalised reporting, which highlights the universalistic nature of findings. By not explicitly stating their involvement in the research process, writers aim to "highlight the phenomena under study, the replicability of research activities, and the generality of the findings" (Hyland 2001: 216). This may explain the general lack of markers of authorial self-mention in the technology sub-corpus.

When it comes to cross-linguistic differences, the English sub-corpus shows a higher frequency of authorial self-mention markers, indicating a stronger interaction between the writer and the reader in these disciplines (reader-oriented writing) (Kreutz and Harres 1997: 181). This style of writing may be related to two separate causes. Firstly, English is a global language of academic discourse with more research output than any

other language (O'Neil 2018: 146), causing more competitiveness when publishing internationally in English and leading to a style of writing which puts forward an emphasis on authority and explicit contribution. Secondly, it may be related to the cultural script of indirectness in interaction (Wierzbicka 2010: 46) and a generally more tentative communication of knowledge. Reader-oriented writing promotes a dialogic style of writing by English-speaking scholars. On the other hand, the style of writing in German has a higher tendency towards using agentless passive, and impersonal and reflexive constructions (Clyne 1987: 213), placing the focus on the research and the presentation of knowledge with fewer personal statements (compatible with writer-oriented writing) and a different kind of establishing of authority (Kreutz and Harres 1997: 181). Based on the results, it can be seen that Serbian authors tend to stand closer to writer-oriented writing on this spectrum, confirming that a display of subjectivity is seen as uncharacteristic of scientific functional style (Blagojević 2011: 209), meaning that an author discusses the matters objectively, with distance, without imparting any subjectivity to it.

These findings can provide a glimpse into the styles of writing related to these cultures and disciplines, but it is important to note that writing is not only dependent on one variable and conventions of national and disciplinary culture. Rather, it depends on a myriad of disciplinary, national, contextual, and co-textual writing cues working in harmony with the author's personal choices based on their "individual personality, confidence, experience, and ideological preference" (Hyland 2005b: 191). Therefore, all choices made in the writing process are simultaneously a prescribed practice of the discourse community (national and disciplinary), as well as individual traits and preferences. However, it is the hope of the author that these insights into both contrastive and cross-disciplinary differences may prove to be a valuable pedagogical resource and aid the pragmatic competence of both more experienced researchers, and young researchers in all three disciplines, as well as second language students, when writing in their mother tongue and engaging with the international academic community.

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