# Academic Writing Tradition and How to Model It

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Abstract: The identification of differences between written texts in different languages remains an ongoing area of academic inquiry. These differences have traditionally been attributed to geo-political factors, genre variations, research and writing traditions, and/or cultural differences. While comparative and contrastive studies have predominantly favored English as the dominant writing language, this has created a noticeable gap regarding writing practices in languages other than English. This gap is further complicated by the absence of a systematic methodological framework for analysing texts across macro, meso, and micro levels. In this paper, we aim to address this inconsistency by laying the foundation of a larger research study (Jürine et al., 2021) aimed at identifying academic writing traditions in the national languages of the Baltic States—Estonian, Latvian, and Lithuanian—as an illustrative case. To achieve this aim we outline a systematic approach to mapping academic writing traditions and construct a model with features that can be used to capture any writing tradition, irrespective of language or culture. We construct this model through an extensive review of literature that provides insights into the defining features that make a writing tradition. Next, we challenge and clarify the notion of a writing tradition by introducing a model designed to capture diversity, moving beyond a singular portrayal of a particular writing tradition.

# Reflection

We attended the IRC workshop in 2018 during the CCCC convention in Kansas City. Participating in the workshop was an immensely beneficial

<sup>1</sup> We would like to dedicate this article to the memory of Anni Jürine, our friend and colleague, who passed away on the 20<sup>th</sup> of April, 2021. Anni played an integral role in the creation of this article—her legacy lives through these words. Her passion for the research and teaching of writing will continue to inspire all of us who have had the chance the meet her.

experience not only for carrying out our project, but also because it made us more aware of the differences between the different contexts of research, and more importantly, the importance of being able to explain them to an international audience. This, in turn, led us to our current project that aims to map Estonian, Latvian, and Lithuanian writing traditions and develop a methodology for investigating writing traditions in our local context and elsewhere.

The project we presented at the IRC workshop aimed to build an Academic Phrasebank for Writing in Estonian. The outcome of the project was a practical one—to collect expressions typical to Estonian academic text and find the functions (moves and steps) that they are typically associated with. Sharing our Estonian writing-oriented project to colleagues with different cultural backgrounds and experiences made us realize that it is not only important to describe what we do in our project, and how we do it (the aim and the method), but it is equally as important to be able to describe why we are doing it and what sort of value it has in our local context, as well as on a more global level. In other words, we would have to explain the necessity for an academic phrasebank and, of greater significance, the rationale behind delving into the exploration of Estonian texts (or other languages, by extension) for its construction. The question arises as to why the approach of translating an existing resource, such as the Manchester phrasebank rooted in English writing, to another language is not simply sufficient.

The reason why we need an empirical analysis of Estonian texts in order to say anything about Estonian academic text is, of course, contextual. What works in one setting, does not necessarily work in others; what makes sense in an Anglo-American context is not necessarily directly translatable in Estonian because the conventions of academic writing vary from culture to culture. This idea is not new—Robert Kaplan (1966) already described in the 1960s how writers with different cultural backgrounds have different thought patterns—and provides a useful point of departure in our context. This phenomenon has been further investigated by many students, critics, and followers of contrastive rhetoric (Connor, 1996; Connor et al., 2008) ever since.

However, what we realized during the workshop, and in many discussions afterwards, is that we do not actually know what an Estonian writing tradition is and how it relates to other traditions, such as Anglo-American or German traditions or other smaller national writing cultures in continental Europe, such as in Ukraine or our neighbors Latvia and Lithuania. Moreover, we realized that there is still much confusion and myths when it comes

<sup>2</sup> Please read the opening statement for this collection, "Editing in US-Based International Publications: A Position Statement," before reading this chapter.

to determining what a writing tradition is and how we can capture it. This has led us to the current paper—a literature review of studies investigating (academic) writing traditions either by investigating them holistically or by identifying the various atomistic features.

## Local Institutional Context

The ambition of the project grew out of the University of Tartu in Estonia, where the study of writing was gaining some momentum due to the establishment of a writing center within the university language center (Leijen et al., 2015). The initial focus was on teaching English language writing through the traditions of English for Academic Purposes (EAP) and English for Specific Purposes (ESP). The University of Tartu is the national university of Estonia and the number of international students at that time (the period between 2008 and 2010) was limited, so the majority of students attending these writing courses were primarily educated in the Estonian education system. As per usual, the teaching of writing took an Anglo-American approach to writing, which is commonly outlined as being problem- and data-based and following linearity of thought (Clyne, 1987; Duszak, 1997; Rienecker & Stray Jörgensen, 2017). As a result, common struggles with writing in English became obvious for non-writers of English. For example, students' inability to write topic sentences, their lack of constructing cohesive and coherent paragraphs (according to the Anglo-American writing traditions), and writing problem-based research papers. As the interest in the topic of writing grew and the authors who attended the IRC workshop increased collaboration (one embedded in the writing in English and the other writing in Estonian), it became obvious that Estonia lacked a clear understanding of its own writing tradition. This lack of understanding only grew when we developed courses to teach Estonian writing. Digging into the Estonian literature for studies focusing on the analysis of text and writing, we found that only a few researchers had conducted and published research about specific text types. However, no comprehensive overview was or is available that constructs a holistic understanding of what constitutes Estonian writing. What was obvious is that the teaching of the "Anglo-American writing styles" were creeping into Estonian writing classes in some schools and some disciplines. When discussing these issues with our Baltic neighbors, Latvia and Lithuania, similar concerns were raised. As such, as a result of a single institutional context addressing the need for their small cultural context to investigate what writing in Estonian is, a larger Baltic network was established. The purpose of this network is to evaluate whether there are any historical, geopolitical (all three countries being post-soviet countries

and all three countries having been in the Baltic-German sphere of influence), or contextual similarities and differences that can be drawn when comparing these three similar yet different countries with different languages and different educational policies. In addition, a larger issue to be addressed was whether we can even talk about an Anglo-American writing tradition versus the traditions that might prescribe the writing of our Baltic languages and cultures. In order to understand our own writing it would make more sense to investigate these through the existence of our own texts rather than a comparison to other "tradition"—whatever these may be.

#### Introduction

The need to identify and distinguish disparities between written texts in different languages, such as English and other languages, has been a subject of study and debate for quite some time. These differences are often attributed to geo-political differences, genre differences, differences in traditions of writing and research (often attributed as a result of education or osmosis), or cultural difference (which can be associated to a larger cultural group, i.e., national level, or smaller cultural groups, i.e., discipline or sub-groups) and generally these differences are measured by observable linguistic difference recognizable in published texts. Historically, the need to identify and distinguish differences emerged when assessing a specific norm of one text revealed inherent disparities from another. Such instances necessitated explanations for these differences, enhancing comprehension and aiding corrections in relation to one text in comparison to another. For example, much of the work of Kaplan (1966) focused on contrasting texts written by different cultures. This approach helped English writing teachers better understand and teach writers who do not write as we would expect them to write.

Even in more contemporary research, investigating, reporting on, and explaining differences in writing across languages and cultures often continues to label differences as different writing traditions (see also Otto Kruse's chapter in this volume, and e.g., Kruse, 2013; Rienecker & Stray Jörgensen, 2003). However, the notion of a "writing tradition" (sometimes also referred to as "writing culture"—as highlighted in Otto Kruse's chapter in this volume) is oftentimes undefined and lacks precision. Furthermore, many more or less related concepts can be spotted, e.g., national-cultural context, also institutional-cultural context (Donahue, 2008); epistemological differences in writing (Kafes, 2017); linguacultural background (Pérez-Llantada, 2021); text culture (Berge, 2007), and also translingualism (Anokhina, 2016; Canagarajah, 2013; Donahue, 2018; Dryer, 2016; Horner et al., 2011; Lu & Horner, 2013), to

name just a few. In the present paper, we aim to provide a better understanding about the possible ways to capture an academic writing tradition. Therefore, it is critical to understand right from the beginning what we mean by a "writing tradition," and why this term is preferred to the other alternatives.

In this paper, "writing tradition" is used to refer to specific shared conventions and practices of writing in a specific context that have been passed down over time. A writing tradition, therefore, is situated within the larger contexts of cultures which are defined by physical or linguistic boundaries, but can also be distinguished in smaller cultures, such as those defined in disciplines, e.g., chemistry, or humanities. In effect, cultures (as in writing cultures) assume a group of people belonging to a culture (e.g., chemists, computational linguists or social scientists) share a writing culture. Whereas, delineating it to a tradition, writing can be characterized by a number of features, such as linguistic or language specific features, geo-political features, institutional features, disciplinary or even text type features, which can be shared across persons or disciplines. As such, we admit that differences are observable all over the place (Bazerman, 2018). To identify what distinguishes a tradition from another tradition, it is necessary to know what to compare within and throughout texts in order to determine whether differences and similarities or which differences and similarities belong to what tradition. As a result, we therefore further elaborate on the writing tradition, as is currently used in literature, and challenge the notion of a writing tradition by proposing a methodological approach that will allow us to place writing within a flexible feature model which can help representing differences and similarities when determine a writing tradition.

As indicated earlier, Kaplan's seminal paper (Kaplan, 1966) on cultural thought patterns has been inspirational to many researchers and practitioners across the globe as a means to make sense how different cultures and languages affect the way we communicate our ideas in text. It is important to note that Kaplan's study has been subject of much debate and criticism in recent years. However, despite its limitations, the discipline of contrastive rhetoric exploded and the number of studies drawing from the field has spun into many different directions, for example, studies evaluating the impact of ESL writing of speakers of other languages. The main criticism of these studies is the overemphasis on the influence of the first language and the neglect of other factors related to education and individual differences among learners. While Kaplan's work remains contentious, it provides a valuable starting point for our study, as it allows us to critically examine the assumptions and limitations of contrastive rhetoric and to explore new avenues for understanding the complex interplay between culture, language, and writing.

We recognize the importance this work has had and still has in the way we investigate and research texts written by writers who do not have English as their primary language or simply do not write in English. However, in our view, Kaplan's doodles have unintentionally created a problematic framework in which cultural diversity in writing is viewed through the lens of a single, dominant standard, rather than being appreciated and studied in its own rights. As a result, most of the research on contrastive rhetoric investigates patterns of written and oral discourse across languages and cultures and with a primary focus on English for Academic Purposes (EAP) research agendas. An example of such dominance is the large body of research focusing on investigating rhetorical challenges students or researchers from varied language and cultural backgrounds have when writing in English as a foreign language as opposed to writing in the language which would be considered the primary language of the writer (e.g., Hyland, 2016; McIntosh et al., 2017). Other research approaches contrast different rhetorical patterns in texts written in different languages, e.g., research articles in English and Spanish (Mur-Dueñas, 2011).

English-oriented comparisons may, however, provide a false image of non-Anglophone writing traditions, despite there being studies that focus on other writing traditions or studies which treat different traditions as equals. These studies often investigate specific text types or genres, such as essays and generalize without giving empirical evidence (Galtung, 1981; Siepmann, 2006). Of course, more contemporary studies take an empirical approach to investigating writing conventions, but these investigations often have a narrow focus and deal with a specific aspect or level of the text, such as rhetorical promotion (Martín & León Pérez, 2014) or metadiscourse features (Mur-Dueñas, 2011). Frequently, these studies take a qualitative approach to their analysis (presuming a manual text analysis) and are therefore based on small size corpora. In addition, many of these studies cover only one specific genre or part of that genre, e.g., research article introductions (Loi, 2010). The overall picture is, thus, scattered and partly fueled by myths that have not been empirically tested.

In this paper, we aim to address this lack of coherence by laying the foundation of a larger research study (Jürine et al., 2021) identifying academic writing traditions in the national languages of the Baltic States—Estonian, Latvian, and Lithuanian, as an example. To achieve our ambitious aim to map academic writing traditions, our first step will be to build a model with features that can be used to capture any given writing tradition (regardless of language or geo-political location or culture). We build this model through an extensive review of literature that offers a hint of what features make a writing tradition (rhetorical structure, stance, authorial presence, coherence/

cohesion, and argumentation). Next, we challenge and clarify the notion of a writing tradition by presenting a model which can capture diversity rather than a single description of a single writing tradition. Finally, we stipulate how we will use the model to identify a writing tradition across Estonian, Latvian, and Lithuanian.

To identify features from existing literature that can be used to characterize a writing tradition, we used contrastive rhetoric (Connor, 1996; Connor et al., 2008), discourse analysis (Biber et al., 2007), and genre analysis (Swales, 1990, 2004). We combine these three to provide us with a more comprehensive perspective of the features needed to map rhetorical structures of academic texts. This comprehensive approach will also allow us to observe features manifested at a macro-, meso- and micro-level of a text. Future analysis using the identified features in the model will need to take an empirical approach, thus special focus will be on being able to operationalize features primarily, rather than siding with a specific school of thought or research approach about these features. Thus, the main contribution of this paper is to provide a holistic model of features which can be used to empirically capture a text to determine a writing tradition by departing from the common narrative about writing traditions which often are based on hunches (Omizo & Hart-Davidson, 2016). Additionally, we aim to consolidate the plethora of research which take a stab at identifying writing traditions atomistically.

# Literature Review: Conflicting Traditions and/or Cultures

To build our model to determine what features make a writing tradition, we wanted to better understand how the term writing tradition is currently used in literature. We have identified three. The first context in which writing traditions are construed is through culture, which according to Imam Munandar (2017) can be traced back as far as Aristotelian traditions and values of Teutonic cultures. As indicated in the introduction, the contrastive movement has regularly reported how cultural norms in one country/or language influences how we write. In other words, when investigating a writing tradition, we are looking for confirmation in styles which conform to cultural norms and values which are highly generalized (Clyne, 1987; Galtung, 1981). More recently, the direct association with culture is also made by Niall Curry (2020) and Lotte Rienecker and Peter Stray Jörgensen (2003) who more specifically link the cultural element to academic cultures and traditions and the academic cultural identity that shape the nature of academic writing (Curry, 2020).

The second context in which writing traditions are used is somewhat related to the first; however, in this context, a writing tradition compares an

Anglo-Saxon context to a non-Anglo-Saxon context (Hyland, 2002). The majority of these studies refer to the dominant tradition, the Anglo-Saxon or Anglo-American tradition, and a submissive tradition: all others (Chitez et al., 2018). Languages and studies where these comparisons have been drawn can be found in Dutch (De Haan & Van Esch, 2004); Czech (Dontcheva-Navratilova, 2013, 2016; Plecháč et al., 2018); Russian (Blinova, 2019; Grigoriev & Sokolova, 2019; Khoutyz, 2016), and Turkish and Romanian (Bercuci & Chitez, 2019; Kafes, 2017), just to name a few. The comparison seems to highlight that a writer of one tradition, for example, the Russian writing tradition, struggles to meet the standards of the Anglo-American tradition. Thus, much of this line of research emphasizes how writers in other languages struggle to write in English as a result of conflicting traditions.

The third context highlights differences in writing traditions not so much through big cultures (geo-political and linguistic), but writing traditions embedded in research traditions (i.e., how we conduct research in general or how we conduct research in specific disciplines) (Jones & Neergaard, 2014; Rienecker & Stray Jörgensen, 2003). These research traditions are occasionally linked to regions, such as Indonesian (Rakhmawati, 2013) or Albanian (Alhasani, 2015). In most cases, however, the distinction is between the social sciences (and/or humanities) and the natural sciences (Olivier, 2016). In the context of educational establishments, a writing program or other institutional settings form the basis of norms and values that constitute what good writing looks like. Often these norms and values are either formed through the institution or a department (Thomas, 2019). In addition, writing style manuals, which are promoted often are imbedded in a specific research tradition (Dontcheva-Navratilova, 2013, 2016).

Thus, in all three contexts, diverse cultural norms that influence the way we write forms a tradition (Solli & Ødemark, 2019). The Anglo-American tradition, which seems to be only written about outside of the Anglo-American context, is the cultural norm (Ryazanova, 2015) and everything else, which seems to be different from the norm, forms its own tradition (Overton, 2015). Often these traditions are rooted in comparative (contrastive) studies, whether in languages in Asia or Europe (Mur-Dueñas, 2011). These narratives are being challenged (Iermolenko et al., 2021) and alternative approaches are suggested, such as critical contrastive rhetoric (Kubota & Lehner, 2004), as the impact itself leads to a bias towards one tradition over another, where writing academically in English often is set as the dominant tradition and all other languages need to adapt their tradition to a tradition that is well established. In our view, the relative scarcity of comprehensive overviews on writing in their specific languages often prompts comparisons with English, which

boasts a well-established tradition of studying writing within educational frameworks, guidebooks, research, and more. Thus, when a writing tradition is contextualized in an Anglo-American tradition, it is often through the lens of how the tradition of writing has changed over time as noted by József Horváth (2001). Such examinations may also contrast different genres, like creative writing versus academic writing, as discussed by Éva Cserháti (2014).

To determine what features make a writing tradition, we departed from a well reported friction in studies reporting on writing traditions across cultures and a key concept in contrastive rhetoric: reader responsibility vs. writer responsibility (Hinds, 1987; MacKenzie, 2015; McCool, 2009; Qi & Liu, 2007; Salski & Dolgikh, 2018). This concept was first introduced by John Hinds (1987) who claimed that a reader and writer's involvement in the textual communication process varies. Often depicted on a continuum, reader responsible is often identified to contain the following features: intuitive argumentation, telegraphic statements, and including loosely connected ideas. On the other end of the continuum, writer responsible text contains features such as, linear argumentation, well-organized statements and coherence.

Despite the criticism Hinds has received on his findings, as reported by Kubota and Lehner (2004), the dichotomy presented by reader vs writer responsible text serves us well. A further investigation into the topic of reader-writer responsibility suggests that writer-responsible texts are characterized as being clear and coherent, having linear argumentation, well-organized statements, deductive reasoning, including interactional resources, explicit transition statements, being practical and action-oriented, and often following the IMRAD structure. Reader-responsible text, on the other hand, are being characterized as ambiguous and imprecise, digressing from the main topic, consisting of loosely connected ideas; and having non-linear argumentation, telegraphic statements, (quasi-)inductive reasoning, subtle transition statements, and being theoretical and subject-oriented.

A similar friction between different ways of writing had also been pointed out by Rienecker and Stray Jörgenson (2003). Rienecker and Stray Jörgenson base their claims on observations made by Michael Clyne in 1987 (Clyne, 1987) who highlighted that differences across or between cultures also exist along another continuum. This continuum, according to Rienecker and Stray Jörgenson (2017), distinguishes on one end of the spectrum the continental (Roman–Germanic) research tradition, and on the other end the Anglo–American research tradition. Some examples of features which are common in the continental research tradition are: a) an inclusion of numerous points and b) claims and conclusions around a subject and text which is primarily considered a thinking text. Whereas examples of features which are common in the

Anglo-American research tradition are: a) one-point, one claim, one conclusion and b) being centered around texts which aim to solve problems. As one can observe a great deal of overlap of concepts and terms used to describe what the ends of the continuum highlight, Rienecker and Stray Jörgenson (2017) equal writer responsible text with that of the Anglo-American tradition and reader responsible writing with the continental traditions. As such the concepts identified in both networks can be merged.

As the assumptions of diverse writing traditions often are depicted comparing one tradition versus another tradition, we can use the features used to present these opposing traits to measure whether and to what extent these features are present. More importantly, following Critical Contrastive Rhetoric (Kubota & Lehner, 2004), we want to be able to identify the non-binary state of these features and locate the features as they generally occur in a text and large amounts of text. The central features of the text that emerge from these two largely coinciding frictions are: argumentation, coherence, structure of the text (rhetorical structure) to which we added two more general and often compared and contrasted overarching features: stance and authorial presence. These features served as initial input for detecting and organizing the component parts of a model that help us to characterize the writing tradition. In the next section, we explain the process of building this model.

# Methodology

The proposed feature model contains the following five features: rhetorical structure, argumentation, stance, authorial presence, and coherence. The features were extracted from the conceptual and terminological conundrum presented in the literature, and identified as often being positioned on a continuum in a text (e.g., a text can be presented with linear argumentation or circular, or anywhere between the two). The features are a result of requiring a framework which would fit our further analysis that would help us to measure a writing tradition.

In order to gain a deeper insight into the concepts and features that current literature use to define differences in academic writing, we reviewed literature on these individual concepts and features. In our choice to select literature to build a feature model, we relied on three main theoretical frameworks: i) Contrastive rhetoric (Kaplan, 1966) or Intercultural rhetoric (Connor et al., 2008) including critical contrastive rhetoric and contrastive linguistics (Kubota & Lehner, 2004); ii) genre theory (Bazerman, 1997) including English for Academic Purposes (Swales, 1990); and iii) discourse analysis (Hyland, 2004; Upton & Cohen, 2009) including text linguistics. The next

step was to categorize the main recurring features being reported on in these traditions which typify an academic text.

Given the nature of these three frameworks, we would be able to identify features which would primarily say something on the text as a whole (macroand meso-level) in studies investigating genre, and rhetoric, and features which would primarily say something on smaller parts of the text (meso- and micro-level) in EAP, genre, and discourse analysis studies. Because of our ambitious goal—to characterize an academic writing tradition as a whole—an important criterion for identifying the features was that they would need to be observable and measurable across the text: macro level (the whole text); meso level (the paragraph level); and micro level (sentence level).

While we recognize that the literature in these domains encompasses a huge variety of features, and that identifiable features can reveal something of a text at one, or two, or three levels, we included these features. This inclusion was made with the understanding that not every feature needs to be observable at each level in every language. For example, lexical devices are primarily used to study the feature stance, mostly at the micro level. The feature examining genre differences might not immediately be revealed at the micro level (as or within individual sentences) but is more likely evident at the meso level (spanning across paragraphs). Nevertheless, we anticipate language-specific variations, implying that the combinations of features and levels should be tailored for each language individually.

As the model would have to help us map our respective writing traditions through empirical analysis, another criterion for reviewing the literature was operationalizability of concepts. For example, we did not only review literature that would characterize a writing tradition (e.g., being coherent or incoherent), but also searched for studies that shed light on how to measure coherence vs. incoherence. Naturally, in the process we came across different frameworks and perspectives on these topics, resulting in a conceptual and terminological conundrum. Once the overlapping frameworks were consolidated and merged into a format fitting our analysis of the literature uncovering an aspect of or aspects of academic writing, we evaluated our concepts and terms and clustered them into a general feature which would help us to measure a writing tradition.

In the following section we will further expand on the features and how these features are manifested in our model and manifested in texts. As we do not view the model to be a static model, given it must be adaptable to accommodate observations in any language, we also include a third dimension to the model which would allow sub features to identify an aspect of another feature and at the same time also identify something about another feature.

For example, in our model, coherence as a feature is often measured through the use of personal pronouns (which is labelled a sub-feature), but personal pronouns can also function as metadiscourse markers, i.e., express stance in our model, and they certainly belong to the feature authorial presence.

As such, our perception of what a "model" identifying a writing tradition looks like refers to what Tiane Donahue and Theresa Lillis (2014) described as "... referring in a broad sense to the different ways in which the activity of writing and activities around writing are construed" (p. 55). More specifically, by modelling a writing tradition, we aim to bridge the limitation current models might present as they are often constructed with "...standard varieties and monolingual frameworks, ... and emphasize the verbal dimensions of writing to the exclusion of other modal aspects" (Donahue & Lillis, 2014, p. 55). Finally, we describe a first attempt at constructing a model across languages and are not presenting a model which is devoid of adaptation and growth. We will assume that with each passing the model can gain features and lose features, gain sub-features and lose sub-features, depending on context, language, and content.

#### Results

In this section, we introduce the five features of our model. Each feature is elaborated on generally, with reference to the literature, by answering the following questions: i) What is it (and what concepts does it include and how are these related); ii) How are these concepts measured in a text (operationalization); iii) What approaches and methods have been used in the past (qualitative, quantitative, corpus methods, computational, etc.) to capture the feature in a text; and iv) What do the differences speak of (discipline variation, academic level of writer, etc.). Plus, we emphasized how the feature itself can be operationalized when measuring a large database of texts across the 3 levels: macro, meso, and micro.

#### Rhetorical Structure

Rhetorical structure describes the structure of the text with a special focus on the function that the text carries. The feature, rhetorical structure, can be observed on all three levels of the text (i.e., on macro-, meso- and micro levels), as reported in the literature. On the macro-level we can observe the global meaning structure of the text (Faigley & Witte, 1981; Hall-Mills, 2010; van Dijk, 1980). Most studies focusing on macro structure of academic texts have investigated the manifestation of the IMRaD structure and/or its

variations (Atkinson, 1999; Day, 1998; Huth, 1987; Lin & Evans, 2012), which are highly frequent in natural and social sciences, while section headings reveal a more topical macro-structure in humanities (Gardner & Holmes, 2010). Other studies report on rhetorical structures manifesting in specific sections of a text (e.g., introduction section, abstracts, summaries, etc.) and in a move-and-step analyses (Swales, 1990), which is a two-level analytic approach, aiming to determine text functions (Connor et al., 2008; Moreno & Swales, 2018). The most famous being Swales' CARS (Create a Research Space) Model which identifies three common moves in introductions of research papers (Move 1, establishing a territory; Move 2, establishing a niche; Move 3, occupying the niche), and each Move containing a number of steps (e.g., Move 1, Step 1, claiming centrality and/or, Step 2, making topic generalizations and/or, Step 3, reviewing items of previous research. Most common Move and Step structures are determined combining topdown and bottom-up approaches, i.e., close reading of texts to determine topic or content shifts and searching for signs in vocabulary or syntactic structure (Fiacco et al., 2019). The unit of analysis varies from clause (on the step level) to sentence (on the move level) to paragraph (Moreno & Swales, 2018). Thus, in our approach, move and step models are observable on macro-, meso-, and micro-level.

This kind of close analysis of text usually calls for a manual analysis, although more recent studies (Cortes, 2013; Li et al., 2020) have applied computational methods to identify move structure in academic texts. The advantage of an automated approach is the ability to process larger corpora, more adequate representation of moves, and minimalization of observer's bias (Li et al., 2020).

Move-and-step models are used to describe the rhetorical structure of a text, which in turn allows us to compare and contrast texts in their specific contexts. There is a number of studies looking at variation in rhetorical structure in terms of cultural variation. For example (Soler-Monreal et al., 2011) investigated research articles in English and Spanish focusing on similarities and differences in the rhetorical structures in the text. Through these differences in the rhetorical structure, differences in the writing traditions are observed. In addition to cultural variation, disciplinary variation is investigated (Stoller & Robinson, 2013). Some authors (Martín & León Pérez, 2014; Yakhontova, 2002, 2006) have pointed out that when explaining variation in rhetorical structure, disciplinary conventions may be even more prominent than cultural conventions.

Determining the move-and-step structure is the ultimate purpose in many studies. However, some authors have used it as an intermediate step to

observe other textual features. For example, after performing a move analysis Thomas Upton and Ulla Connor (2007) performed further functional analysis, in which they observed the use of stance devices (Biber et al., 1999) in order to determine typical stance structure of moves. Similarly, Budsaba Kanoksilapatham (2007) performed a move-and-step analysis on fundraising letters, which was complemented by multidimensional analysis, which allowed her to identify and analyze linguistic characteristics of each move type. Pedro Martín and Isabel León Pérez (2014) observed self-promotion against the backdrop of Swalesian CARS model in the introductions of research articles. As such, move-and step structures can be a research goal in itself as well as a gateway to observe other features.

## Argumentation

To simplify our understanding of academic writing, we apply the term academic writing to mean writing that focuses on presenting arguments supported by research. While this statement may be a broad generalization, for the purpose of this paper academic writing primarily involves using language to introduce ideas and present evidence that either supports or refutes those ideas, based on findings in research. In other words, argumentation is to make use of language to communicate reason. The focus, thus, is to inherently link language with argumentation, which opens the possibility to measure and investigate language to detect ways through which arguments are structured. As such, we apply the feature of argumentation to be embedded in a theoretical framework which measures argumentation through discourse analysis and rhetorical analysis. The latter, rhetorical analysis, partly overlaps with the feature rhetorical structure.

In writing research, argumentation schemes and structures often rely on Stephen Toulmin's argumentation theories (Toulmin, 2003) to map the several components that identify argumentation in text: premise, claim, warrant, or attack (Accuosto & Saggion, 2020; García-Gorrostieta & López-López, 2018; Lawrence & Reed, 2020). In text, argumentation can manifest itself at the macro-, meso-, and micro-level. At a macro-level, for example, the general structure of a paper such as the journal article and most Bachelor's and Master's theses are formatted around a structure representing a cohesive argument, starting with an introduction of the topic, claims, questions, thesis; followed by a research method, and results; followed by a discussion and conclusion—often resembling the basic essay structure or IMRaD structure. At its root, the macro structured argumentation resembles the classical Aristotelian Rhetoric, i.e., rhetoric as a theory of argumentation (Kienpointner,

2017). However, in comparison to our previous feature, rhetorical structure, for argumentation we separate a more discourse analysis to argumentation, extracting the persuasive element.

At a meso-level, argumentation manifests itself following the general patterns used in the different types of arguments. For example, inductive arguments often display results followed by a generalization of the observation of the results. Deductive arguments, on the other hand, start with a major premise and a supporting premise from which conclusions are drawn. Applied to Toulminian argumentation, at a meso-level, text will often follow a pattern where a claim is provided, grounds are given, and a warrant offered. Given these structured patterns, argumentation schemes and taxonomies have been developed from authentic empirical examples in corpora (Kienpointner, 2017). For example, argumentation mining often resort to the annotation of the argumentative units of claims and premises (Aharoni et al., 2018), whereas other studies expand on these two basic units to include proposal, assertion, result, observation, means, and description (Accuosto & Saggion, 2020).

Finally, at a micro-level, the general structures provided by the different argumentation schemes come with specific linguistic cues which identify a specific discourse relationship between a premise, for example, and a rebuttal; e.g., however, accordingly, in conclusion (Lawrence & Reed, 2015; Palau & Moens, 2009). As such, identifying key linguistic cues in a text may offer an entry point in being able to detect larger (meso and macro) chunks of arguments in a text. Earlier studies of argumentation have primarily used hand coding and annotation to identify these different argumentation components and build taxonomies to help identify the specific linguistic features (Kienpointner, 2017). More recently, these taxonomies have been used to build an automatic classifier to be used to automatically annotate and identify the applied schemes in large amounts of text (Accuosto & Saggion, 2020; García-Gorrostieta, López-López, & González-López, 2020; García-Gorrostieta, López-López et al., 2021; Kirschner et al., 2015; Lawrence & Reed, 2017). In the last decade, many of these argumentation patterns, schemes, and taxonomies are being used to automatically identify argumentation structures in texts using machine learning techniques (Lawrence & Reed, 2015, 2016, 2017). For example, a strand of research called argumentation mining (Lippi & Torroni, 2016), which has grown out of the field of argumentation mapping; through argumentation schemes and structures (Kirschner et al., 2015; Peldszus & Stede, 2013), and argumentative zoning (Moens, 2013).

Argumentative zoning (Teufel et al., 2009) approaches the identification of specific aspects of argumentation in text (scientific texts more specifically)

in accordance to the different functions on a macro- and meso-level of the text, and allocates a more rhetorical function to argumentation in text and the Toulmin model (Kirschner et al., 2015; Peldszus & Stede, 2013). Argumentative zoning, in comparison to argumentative schemes and structures seeks to identify the formulaic expressions that belong to argumentation. Given the relevance to identifying different modes and usages of argumentation in text, and assuming that argumentation in text occurs differently across text genres, disciplines and even writers, the application of argumentation mining offers a very rich feature of writing tradition, assuming there is not one approach or application of argumentation.

Academic writing is a genre of writing where the use of logic and argumentation is essential, thus, being able to identify how patterns occur and where and how they manifest themselves in a text is of great value to not only understand the text as a whole, but also the writer. Applying such analysis across languages and across genres would provide evaluators of texts a tool that would allow them to identify these components, regardless in form or language they have been produced.

#### Stance

Stance refers to the author's personal opinion or attitude, encoded in the text they produce. The way academics persuade readers and present their claims is both linguistically and culturally relevant, as the scientific community is challenged with presenting their findings in a modern society. Linguistic nuances of scientific writing are therefore productive indicators of cultural context.

The terminology surrounding the topic of stance is rather varied, with researchers using such umbrella terms as affect (Ochs & Schieffelin, 1989), evaluation (Hunston & Thompson, 2000), appraisal (Martin, 2000), and footing (Goffman, 1981). More granular fields in this category are evidentiality (Chafe & Nichols, 1986), hedging (Hyland, 1998), intensity (Labov, 1984), and engagement (Hyland, 2004). For the purpose of our study, we follow Bethany Gray and Douglas Biber (2012) in referring to the overall concept entailing all mentioned fields as stance.

The notion is not internally uniform as one can differentiate between attitudinal stance and epistemic stance. While attitudinal stance, sometimes also called affect, refers to the author's personal feelings (e.g., expressed with phrases such as fortunately, sadly) (Ochs & Schieffelin, 1989), epistemic stance, sometimes called evidentiality, reflects the degree the author expresses certainty (clearly, impossible) or doubt (assume, perhaps) (Chafe & Nichols, 1986). While remaining conceptually different, most approaches attempt

to view attitudinal and epistemic stance together (Hyland & Jiang, 2016), because as showed by Biber and Edward Finegan (1989), they are largely expressed by the same linguistic devices.

A large number of linguistic devices expressing attitudinal stance were identified by Elinor Ochs and Bambi Schieffelin (1989). For instance, in English Ochs (1989) and Schieffelin include the use of "get" passive (this got refuted) to express adversative or confrontative affect, the use of mood (if only) to express positive affect, etc. (p. 12). Reyhan Ağçam (2015) shows that attitudinal stance is more commonly expressed by verbs (hope, require) than nouns (thought), adverbs (hopefully) or adjectives (glad). As academic texts are generally believed to be scarce in attitude (Hood, 2010; Hyland & Jiang, 2016), researchers of academic writing have paid more attention to epistemic stance than attitudinal stance.

Epistemic stance can be expressed by means of various lexical and grammatical elements as well (Hyland, 1998). Biber (2006) points out that adverbs reflecting a high degree of epistemic certainty (actually, certainly) are the most commonly used adverbs in academic text. Biber also shows that complement clauses with stance nouns, such as that- and to-clauses, are generally only present (and common) in written academic registers (The possibility that ...), while that-complement clauses with certainty words are common in both spoken and written registers (It is known that ...). According to Biber (2006), the latter also constitutes a stance marker very characteristic of academic genres, when compared to other registers.

Epistemic stance can be measured in a number of ways. Most approaches view it as a binary variable. For instance, Sue Wharton (2012) measures the occurrence of hedges (may, could, indicate), boosters (obviously, a clear connection) and vagueness (most of the points). Similarly, phrase units are categorized as either as epistemically hedged or direct in Françoise Salager-Meyer et al., (2012). However, Halil Kilicoglu and Sabine Bergler (2008) take a more detailed approach, viewing epistemic stance as an interval variable. They assigned each lexical cue (obviously) a numerical weight between 1 and 5, depending on its semantic strength. Syntactic cues (e.g., negation and governed infinitives) then either add or deduct points from lexical cues. Their system was also used by Alan Gross and Paula Chesley (2012) who calculated a hedging score for each sentence in their datasets based on it. This allowed them to use a regression model to compare several groups of texts.

Researchers have also outlined the differences between writer levels (student vs. professional) and/or language environments and used the results to offer guidelines to student or L2 writers for adopting academically successful rhetoric practices. For instance, Ken Hyland (2012) shows that student writers

in Hong Kong use various stance techniques much less frequently than professional writers in research papers. Several papers have found L1 to be a relevant factor in determining the amount and form of attitudinal stance in a text, when comparing academic texts with authors of different first languages (Ağçam, 2015; Blagojević, 2009; Hatzitheodorou & Mattheoudakis, 2010).

#### **Authorial Presence**

Another feature that emerges from the literature on academic writing is authorial presence. Authorial presence is understood as "the degree of visibility and authoritativeness writers are prepared to project in their texts for personal support of their statements when expressing their attitudes, judgements and assessments" (Dontcheva-Navrátilová, 2013, p. 10). As such, it is closely connected to stance, which was discussed above (see, for example Hyland's work on authorial stance Hyland, 2002; Hyland & Jiang, 2016). In our account, we consider authorial presence as a separate (yet related) concept, which includes many other concepts, such as self-mention, authorial identity, self-promotion, self-citation, and averral and attribution. Defined as such, authorial presence can be viewed on all levels of the text, i.e., macro-, meso-, and micro-level.

The question whether the author should be hidden or visible in academic text has been a central one in research on academic writing. Even though the traditional understanding would have the author divorced from the text, especially in the pedagogic literature (Harwood, 2005), recent research on the matter has revealed self-mention as a rhetorical device used to emphasize writer's contribution (Hyland, 2001). As such, the focus has shifted from the question whether the author should be mentioned or not, to the question how does the authorial identity manifest itself in the text. One of the most common means of looking at authorial identity/self-mention is through Ist person pronouns I, me, my, we, us, and our (Hyland, 2001). However, studies have also looked at nominalizations, anticipatory it, inanimate subjects, passive constructions as means of representing the author (for an overview, see Walková, 2019). Authorial presence has also been investigated from the perspective of the function that the pronoun carries, e.g., I as the representative, I as the architect, I as the recounter of the research process (Tang & John, 1999). As such, self-mention is mostly observed on the micro-level of text.

One of the most central aspects of authorial presence is self-promotion. This is especially relevant in the context of this investigation because self-promotion has been a topic of interest in respect to cultural and disciplinary variation. Cultural variation in self-promotion has been investigated, for

example by Phillip Shaw (2003) who looked at promotional language used in academic texts written in Danish and English. In addition, more and more work focusses on disciplinary variation and cultural and disciplinary variation in combination. For instance, Tatyana Yakhontova (2002, 2006), who studied Slavic and English writers, observed stark differences in self-promotion between mathematicians and linguists. Martín and León Pérez (2014) who investigated promotional value in research articles in Spanish and English found that within specific disciplines cultural background overrides the influence of disciplinary background, but when looking at broader fields, it is the disciplinary conventions that seem to influence self-promotion more.

Even though self-promotion is also most obviously observable though pronouns, i.e., on the micro-level, it also manifests itself on the meso-level. For example, Nigel Harwood (2005) claims that pronouns are used to express other text functions, e.g., creating a research space, reporting or summarizing findings, explaining the researcher's previous work. Self-promotion is also observable on the macro-level, for example Carol Berkenkotter and Thomas Huckin (1995) associate self-promotion with whole sections of text, such as the abstract, which arguably serves to as a screening device that foregrounds important information and summarizes the main points. They also view titles of research articles, where it has been measured through results statements per unit.

A close concept to self-promotion is that of self-citation. Hyland and Feng Jiang (2018) looked at frequency and disciplinary variation of self-citation. Self-citation can be viewed as a rhetorical tool for author's visibility that writers can use to demonstrate progress and consistency in their research over time. It also helps them to establish credibility and authority and advocate their earlier research. Studies in self-citation have demonstrated disciplinary variation (Aksnes, 2003; King et al., 2017). In addition to observing how authors refer to their own previous work, the author's presence and contribution can be viewed through their dialogue with other authors. The presence of the self and the others in academic text has been investigated for example as polyphonic visibility (see Fløttum, 2005), and through the concepts of averral and attribution (Abdesslem, 2020; Sinclair, 1986).

Averral and attribution are used to identify, position, and evaluate and position voices in academic texts (Groom, 2000). As such, we observe again a close connection between authorial presence and stance, because it signals to what extent the author aligns themselves with the statements made. Averral and attribution has been operationalized through reporting verbs (e.g., claims, argues) and citation patterns (where the citations are located within a sentence and in a paragraph). As such, we can observe it on micro- and meso-level of

the text. Citation patterns are usually studied qualitatively. However, more recent research also suggest computational methods are applicable (Omizo & Hart-Davidson, 2016). The benefit of studying citation patterns using computational methods supports the testing of different types of taxonomies currently used to determine different citation patterns in a text to determine a) the reliability of the taxonomy when evaluating it on a large set of texts, and b) to determine whether any specific observable patterns emerge when testing large sets of texts. In addition, testing different taxonomies will also help to determine which of these taxonomies can be reliably identified by computational methods. Ryan Omizo and William Hart-Davidson (2016) in their study compared a computational rhetoric analysis to analyze the use of citations to the same research caried out by qualitative researchers coding by hand. The results were promising as the reliability of identifying citation patterns using computational analysis matched those of the hand coding study.

## Coherence (and Cohesion)

Coherence seems to be one of those basic terms in linguistics that is known by every linguist but has proved rather difficult to define and explain exhaustively. Coherence is generally understood to indicate something about the relationships and network of discourse referents and discourse segments which work together in a text so that the text can be understood to "make sense." Coherence, at the same time, is often very differently understood in terms of how these relationships are measured or valued. The concept of coherence, in the context of this paper, has its roots in text and discourse analysis and it generally refers to the continuity of the propositional content and concepts referred to, that is necessary for a text to be meaningful (Halliday & Hasan, 1976). Coherence is often used as an umbrella term to cover two slightly different text qualities: coherence and cohesion (Sanders et al., 1992; Taboada, 2019). Coherence as opposed to cohesion relates to the meaning of the whole text and how all smaller textual units (e.g., sentences and clauses) are connected to make sense to meaning, having specific world knowledge as a background. Cohesion as opposed to coherence concerns the overt expression of how lexical elements stick together, i.e., how entity relations are shown, for example through different referential expressions (Berzlánovich & Redeker, 2012; Halliday & Hasan, 1976; Morris & Hirst, 1991; Taboada, 2019).

For a further treatment of this feature in our model, we generally refer to the term coherence only and simultaneously draw the commonly accepted distinction between different types of coherence: relational coherence on the global (i.e., meso and macro) level to generally refer to coherence on the semantic and pragmatic levels of language, and referential coherence (i.e., cohesion) on the local (i.e., micro) level as indicated by lexicon and grammar (Das & Taboada, 2019; Degand et al., 1999). The first type—relational coherence—most generally relates to the use of different connectors (e.g., because, so, besides, etc.) and other means used to identify relationships between successive sentences in a text. The main linguistic devices in the second type—referential coherence—cover various referential expressions, including deictic and anaphoric devices (e.g., r<sup>st</sup> person pronouns, 3<sup>rd</sup> person pronouns, demonstratives, shifters, etc.) that build connections between entities that are referred to in the text (Das & Taboada, 2019; Degand et al., 1999; Donahue, 2008; van Dijk, 1980).

The importance of measuring (different types of) coherence as a feature of text, across languages and cultures (for example, C. Donahue, 2008), is based on the common understanding that coherence (and cohesion) is needed for the intended message of a text to be communicated successfully by the writer of that text (Knott & Dale, 1996). According to Betty Bamberg (1983, p. 417), "writing that lacks coherence will almost certainly fail to communicate its intended message to a reader." This latter statement highlights why coherence needs to receive a much more thorough analysis across languages and cultures; especially when considering the fact that in our methodological justification, we presented a dichotomy which somewhat questions the validity of Bamberg's statement: reader versus writer responsibility—with the added presumption that less coherent text leans more towards reader responsible text and more coherent text towards writer responsible text. We, however, want to challenge this notion by considering, perhaps, whether it is based on the understanding how we measure coherence, or who does the measuring, which offers more insights into a writing tradition (Kubota & Lehner, 2004).

To measure coherence in a text, different approaches have been proposed. Perhaps the most common approach is identifying various discourse relations across a text, i.e., the inferred connections between propositions that the writer/speaker or the addressee makes or is expected to make in order to establish a coherent text (Asr & Demberg, 2012; Taboada, 2019; Trnavac et al., 2016). William Mann and Sandra Thompson (1988) have identified as many as 23 discourse relations across a text (e.g., relations of cause, evidence and justify, restatement and summary, etc.), whereas Andrew Kehler et al. (2007) identified as few as six common discourse relations between portions of texts that form different propositions (e.g., occasion, elaboration, explanation). Other studies suggest that the main identifying relations of coherence across a text are cognitive relations (Sanders et al., 1992). According to Ted Sanders et al. (1992), the different relations form

based on principles resting in argumentation, such as those in argument and claim or relations of cause and consequences, as can be identified in text. Some of this manifests semantically, others pragmatically. Both the discourse relations and the cognitive relations approach provide guiding taxonomies; and in the case of cognitive relations, are tested across languages (Dutch and English) (Sanders et al., 1992).

Another way to look at coherence is by analyzing common linguistic devices which are used across two or more portions of texts to signal a particular discourse relation. These devices, although understood relatively similar among researchers, have been referred to with different terms, e.g., signaling phrases (Sanders & Noordman, 2000), cue phrases (Grosz & Sidner, 1986; Knott & Dale, 1996), or discourse markers (Das & Taboada, 2019) (e.g., since, because, nevertheless, etc.). Oftentimes, the inclusion and connection between these phrases determine how parts of the texts are connected, and these manifest themselves at the level of words, phrases, and sentences, paragraphs, and wider spans of text. Some studies, however, have only taken account of connections which are made at the sentence and clause level (e.g., Knott & Dale, 1996), while other studies consider various types of other possible coherence-creating devices as well, for example referential expressions in the text (e.g., Asher & Lascarides, 2003). The problem when annotating only the signaling phrases is that not always are these phrases indicative of the whole text spans in terms of coherence, and multiple signals can appear together with other contextual signals (Das & Taboada, 2019).

For our study, coherence as a feature in the model may prove to be difficult to measure but essential to identify. The advantage of the above-mentioned approaches is that one takes a more top-down approach to measure relations of coherence by identifying the discourse relations, and the other a bottom-up approach to measure coherence by first finding the signaling phrases in the text. Exploring ways to automatically identify these across a text will take both approaches to validate how these relations will manifest themselves in texts which are written in languages which are not Indo-European languages.

## Discussion

We generally seem to have a hunch what a writing tradition is and what it is not. Currently, however, we lack the understanding how we can holistically and empirically measure a writing tradition in general and specifically. The aim of this paper was to address this lack of a coherent overview of what constitutes a writing tradition by laying the foundation of a larger investigation mapping academic writing traditions in the national languages of the

Baltic States—Estonian, Latvian, and Lithuanian (as examples). All three languages lack a comprehensive overview in literature. To achieve this aim, we propose the five-feature model outlined here that can be used to identify a multitude of aspects in a text that can be used to measure writing pertaining to a tradition, discipline, culture, or language (or as a combination of these). To develop the model, we used studies in contrastive rhetoric, discourse analysis, and genre studies to identify features that manifest themselves at the macro-, meso-, and micro-level to get a comprehensive overview of a whole text rather than just parts of a text (for example, only an abstract or summary).

Moving forward with the model, the next step in the research is to start identifying these features and sub-features in the literature addressing the three targeted Baltic languages (Estonian, Latvian, and Lithuanian). As the model has to identify features of languages other than English, a knowledge base would need to be constructed of the language(s) the model is modeling. For example, for the feature Stance, we do not want to rely on studies conducted about Stance in English to determine where Stance manifests itself in a text, but rely on studies about Stance conducted in Estonian, for example, to determine where it manifests itself and how. If no studies have been conducted about Stance in Estonian text, we have identified a gap in research, plus an opportunity to build a taxonomy to investigate Stance in Estonian from the ground up, rather than from the perspective of English.

Once literature or gaps in literature about the features and sub-features of our model have been identified, the next step is to (1) fill the gaps and/or propose investigations to fill the gaps, (2) identify whether current literature provides evidence how the feature can be measured in the target languages, and (3) if not, develop and identify a systematic approach to measure these features in the target languages. To identify these features, we will need to develop a large database containing academic texts in the target languages. These texts can be scraped from existing open databases such as university libraries (e.g., digital BA, MA and Ph.D. theses), and open databases of journal articles, year books, conference proceedings, etc. Collecting this data across the three languages also provides insights into the relative prominence of scholarship in these languages, as countries with strong policies to promote scholarship in their national languages are likely to have a larger body of academic writing in those languages. Given the flexibility of the model and the extent of the dataset, the next step involves building Machine Learning and Deep Learning models which can identify the features and/or sub-features and how these features and/or sub-features manifest themselves in these texts. One step is to have the algorithms detect patterns with minimal bias or support (unsupervised learning), and the other step is to have the algorithms

detect patterns with the input of existing taxonomies belonging to a feature (supervised learning). The main idea behind either approach is to gather as much evidence as possible across a large number of texts which will also allow us to adjust for text type or genre (e.g., BA, MA, of Ph.D. thesis) or discipline (e.g., Medical Science journals, MA theses in humanities or linguistics) or year (e.g., only texts from 1995–2000).

Finally, once we have described the observations, we can return to the texts and apply a more ethnographic approach questioning specific cohorts of people (students, teachers, researchers, etc.) across the different text types, genres, and disciplines how their personal perspectives towards an Estonian writing tradition, for example, is observable in the data and vice versa. Also, given we have data and observations of the data across three Baltic languages, who share a similar geo-political history, can we observe similarities which might be attributed to culture or tradition. Or can we observe similarities across specific institutions of higher education across the three countries or genres or disciplines. At the moment, we can only assume, as we do with many writing "traditions" in languages other than English, and the aim of our study, how to model an academic writing tradition, is to provide a methodological approach applicable to any language and any text type, genre and/or discipline.

The novelty of our proposed model is to fundamentally seek a shortcut or a "quick and dirty" method to catch up on the wealth of research conducted on texts written in English or compared to English. Rather than being informed by what is known, a more language-driven model can be used to investigate what might be—if we collect and make observations of a very large collection of academic papers written in other languages. As a result, we may begin to ask simple questions to test the main assumptions, such as: is author stance genre driven, or do we observe stance to be driven by specific journals, disciplines or across various disciplines? What type of rhetorical structures can be observed across various universities, and can we observe differences and/or similarities across languages? How strong is the influence of survivorship bias in texts published in journals in comparison to BA, MA, or Ph.D. theses?

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# Glossary

**Feature:** In this paper, feature is a means for describing a writing tradition. As such, we refer to the model for investigating writing traditions a feature model. Every feature in the model describes and consists of a whole range of concepts relevant to this particular feature. These concepts are operationalized as linguistic devices that may be grammatical, lexical, constructional, etc. **Macro-level:** Means the largest textual unit of analysis, i.e., the complete text. **Meso-level:** Refers to sections and paragraphs as the textual unit of analysis.

Micro-level: Refers to the sentence or word unit of analysis.

**Sub-feature:** Sub-features are features which can manifest themselves across the five identified features, and across the three different text levels (Macro, Meso, and Micro level).

Writing tradition: The term Writing tradition is used in a broad sense to stand for shared conventions of writing in a specific context. A writing tradition is located within larger cultures defined by physical or linguistic boundaries, but can also be distinguished in smaller cultures, such as those defined in disciplines, e.g., chemistry, or humanities. A tradition can be characterized by a number of features. For a more thorough elaboration on the term see the chapter entitled: Literature review: conflicting traditions and/ or cultures.

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