Iga Maria **Lehman**

University of Social Sciences in Warsaw

ilehman@spoleczna.pl

ORCID ID: 0000-0002-2092-8119

A Cultural-cognition Approach to Voice: Analysis of Scientific Stereotype in Polish and English Writing

Abstract: This paper proposes a 'cultural-cognition' approach as a tool for the investigation of authorial self-representations, enabling us to look at scientific outputs as the products of the language-mind-culture triad situated in socio-culturally determined contexts. By examining a cognitive notion of a stereotype, which is produced within these contexts, I suggest an open-ended cognitive framework for more informed voice analysis, consisting of different aspects of scientific stereotype in Polish and English.

Specifically, the focus is on two aspects of this stereotype; namely, the purpose and method of communicating content in Polish and English scholarly discourse. In so doing, I consider the contents in linguistic outputs that manifest the stereotypical thinking of scientific writing in English and Polish, which, if not recognized acknowledged and attributed, can lead to the failure of EAL (English as an Additional Language) writers to communicate their ideas and participate in the international research communities. The ultimate purpose is to use this framework as an explanatory device to challenge the concept of a universal scientific language which is devoid of cultural influence in the construction and diffusion of knowledge.

Key words: cultural-cognition approach, cognitive framework, intercultural pragmatics, scientific stereotype, academic writing

Introduction

This enquiry focuses on discourse produced in the field of science which, according to Bourdieu (1991), is the space occupied by agents and institutions that produce, reproduce and diffuse science. It is a field of forces, a field of struggles, a social world that involves relations of domination. My approach has a certain affinity to this view as I argue that the objects of research, the chosen themes, the points of view, the institutionally sanctioned writing norms and the places of publication are influenced by the relations between the different agents who belong to a given community of scholars. I also hold that these communities are areas of intellectual conflicts which can be seen as power struggles. The academic world is no stranger to phenomena such as; concentration of capital and power, monopolistic situations, dominant social and professional relations and appropriation of the means of production and reproduction. In the context of academic production, the hegemony, which scientific English enjoys today, grants power to English-speaking academics and has ramifications for academic communication across the world.

While international scholars are increasingly pressurized to write and publish in English, many struggle with the requirements of Anglo-based writing conventions, which rely on linear, coordinated and symmetrical principles. Consequently, academic writers, whose mother tongue is not English and who continue to employ their native language's normative standards, find their academic outputs potentially disadvantaged and marginalized within international scientific discourse communities.

In the light of the above observation I argue that Benesch's call to replace 'critical needs analysis' with 'rights analysis' should pertain not only to EAP (English for Academic Purposes) students but also to EAL (English as an Additional Language) scientific writers as, "*rights* [...] highlight academic life as contested, with various players exercising power for different ends. Rights, unlike needs, are political and negotiable. They are a way to conceptualize more democratic participation for all members of an academic community" (Benesch, 2001, p. 62; italics in the original) (see also Kramsch, 2001; Casanave, 2002; Canagarajah, 2002). Benesch's argument views non-mother-tongue academics as agentive participants able to question and negotiate their positioning as subjects who are expected to comply to externally imposed constraints. By emphasizing the role of power relations in scientific discourse, rights analysis sheds light on important political and ethical aspects of scholarly writing, which are often overlooked in the literature. Power relations often require writers to align themselves with notions about what convincing prose and persuasive writing looks like, by conforming to the pre-established rhetorical conventions of their English-speaking disciplinary communities. This is the mechanism with which the dominant academic ideologies and discourses position EAL writers.

The emergence of different kinds of legitimate English around the world is, however, undermining this hegemony of the Anglo-based rhetorical and linguistic conventions. As demonstrated by new developments in merging stylistic features of the Hausa language with English or the legitimization of localized models of English in China, the extent to which EAL writers align themselves with rhetorical and linguistic standards of English varies across cultures.

Therefore it seems timely and worthwhile to readdress the notions of what can be regarded as successful academic communication and to search for means of communication that will foster cross-cultural

dialogue and improve conditions for a global exchange of academic enquiry. The questions which arise here include the following: What kind of international academic communication is possible and desirable? How can EAL academics be integrated into international scholarship without being essentialized and gain 'a profit of distinction' (Kramsch, 2001) by using English in unique ways due to their multilingual and multicultural backgrounds?

Writer's voice has been investigated in a large number of text-focused studies such as; (1) those focusing on discoursal features including (a) the concept of metadiscourse (Hyland, 2004); (b) self-referential pronouns (Matsuda, 2001); (c) modality, lexis, nominalization and the use of the 'I' pronoun (Tang, & John, 1999), (2) those investigating ideological and thematic revelations (Pavlenko, 2004), (3) those combining the above two research approaches in their analyses (Clark, & Ivanič, 1997) and (4) those analysing the reader's perceptions of voice (Morton, & Storch, 2019). Drawing on these studies, which work on the theoretical assumption that written texts are constituted by authors' discoursal choices available to authors in their institutional and disciplinary contexts, I argue that in case of EAL writers the negotiation of their multiple and often conflictual identities in relation to changing cultural and discursive context is often a desperate struggle.

In what follows, I intend to provide deeper insight into how Polish scientists perceive and construct their authorial voice when writing in English by analysing two aspects of culturally constituted stereotype of scientific writing pertaining to the purpose and method of communicating scientific content. My purpose is to show that the existing list of parameters that are typically considered when evaluating voice, such as clarity of ideas and content, the manner in which content is presented, consideration of discipline-specific rhetorical norms and writer and reader presence (see e.g., Palacas, 1989;

Helms-Park, & Stapleton, 2003; National Writing Project & Nagin, 2003; Zhao, 2012) needs to include those which are deeply rooted in the EAL writers' perceptual cognition. The identification of these parameters will undoubtedly enable us to establish a culture-sensitive cognitive framework which can explain the role of culture in the process of voice construction in both the writers' native language and in English.

It is important to note that this framework needs to be approached as a dynamic construct, subject to change over time as well as open to new elements from different cultures and disciplinary discourses. The ultimate purpose is to use it as an explanatory device to challenge the concept of a universal scientific language which is devoid of cultural influence in the construction and diffusion of knowledge.

Normative standards considered in this framework, translatable as they are into rhetorical strategies of argumentation, reflect important cultural assumptions about research and what counts as a contribution to science. Obviously, they are not the only reason why Polish academics struggle to enter into scholarly exchange with other academics from international research communities. Lack of English language proficiency, for example, is the key reason that keeps many Polish researchers in isolation from the world of international scholarship.

Rhetorical traditions of scientific writing

Undoubtedly, the intellectual legacies of a given discourse community affect how research is done and reported and this has been reflected, for example, in a number of typologies for writing conventions. Representative of these typologies is the well-known Galtung (1985) classification, grounded in CR (Contrastive Rethoric) research, which features four rhetorical styles; 'Saxonic', 'Teutonic', 'Nipponic' and 'Gallic'.

The Anglo-based 'Saxonic' style is said to characterize a low-context pattern of argumentation, in which speakers/writers have a clear purpose, a matter-of-fact tone and are very direct and positive in their assertions. For example, the dominant stereotype of a conference presentation or a lecture in this academic tradition is in line with the general listener-/reader-friendliness of academic discourse in this culture: the audience is addressed directly and there is a lot of pausing and jokes to enhance speaker/audience communication. However, this is not the case for German-based 'Teutonic' and French-based 'Gallic' academic styles which place theoretical arguments at the centre of their intellectual processes, and therefore are strong on theory formation and digressive argumentation strategies, but weak on thesis statement. The 'Gallic' style, however, is not as strongly focused on deduction and intellectual construction as the 'Teutonic' style, as it is more directed towards the use of the persuasive power of words in an aesthetically sophisticated way (*èlègance*). It is clear that matters of high importance in the 'Saxonic' rhetorical tradition, such as a preference for a coherent organization of a speech/text, are not deemed as important to academics subscribing to the 'Teutonic 'academic conventions, who value the intellectual depth and the richness of their works more than a clearly structured form. Finally, the East-Asian-based 'Nipponic' academic tradition features a more modest, global and provisional approach, in which knowledge and thinking are thought of as being in a temporary state and open to change. It is characterized by an affective style of interaction dominated by defensive formulas to mitigate argumentation, typical of high-context cultures (Pervez, & Usunier, 2003, p. 123; Lehman, 2018, pp. 109–110).

Galtung's observations pertaining to 'Teutonic' style, and extended to languages such as Polish, Czech, and Russian, were confirmed by Clyne (1987) who described several disparities in discourse patterns between these two writing conventions. Clyne compared textual hierarchy,

symmetry of text segments, argument development and uniformity of formal structures in the articles written by English-speaking and German-speaking linguists and sociologists. His findings have shown that texts written in German by scientists with a German educational background tend to be more digressive, asymmetrical, demonstrate discontinuity in argument, and contain less metalanguage to guide the reader than texts written by their English-speaking counterparts.

Although criticisms of the above distinctions, which are said to promote conceptual oversimplifications and the dominance of the Anglo-based academic tradition, have risen a lot of controversy, these taxonomies undoubtedly highlight what is most important in discourse production; namely, the role of culture in this process.

Intercultural pragmatics approach

Therefore, the approach to culture I adopt in this paper owes much to what Keckes discusses in his work on intercultural pragmatics (Kecskes, 2015) in which culture is seen as dialectical and dynamic and therefore considered as both static and ever-changing. As Kecskes points out, "It has both a priori and emergent features […] and changes both diachronically (slowly through decades) and synchronically (emerges on the spot, in the moment of speech)" (Kecskes, 2015; see also Benedict, 1967; Durkheim, 1982). The intercultural pragmatics view of culture seems to successfully combine these two perspectives as it does not rule out the fact that nationality or ethnicity may have a significant influence on communicative behaviour. This approach is not congruent with today's mainstream way of thinking about culture, which views culture as being contingent, situationally dependent, and emergent at the moment of communication and emphasizes that the influence of culture's ethnic or cultural characteristics onto the communicative behaviour a priori is

dominated by other more immediate contextual sources (e.g. Rampton, 1995; Matsuda, 1997; Matsuda, & Atkinson, 2008).

However, the intercultural pragmatics view of culture allows me to argue that meaning is co-constructed in situational contexts, and that this process contains both elements from the participants' a priori cultural knowledge and elements which emerge in an immediate communicative act. This argument is supported by Halliday's (1978; 1994; with Hasan, 1989) explanation of how meaning is related to language. Halliday uses two expressions originating in Malinowski's (1935) anthropological work[1]: *the context of culture* and *the context of situation*. By *the context of culture* Halliday means the socio-historical factors which influence meaning and consequently, the linguistic decisions of the speakers/writers that follow from them, and points out that only certain m*eanings are possible due to "a tyranny" of socio-cultural conventions. The context of situation* refers to the construction of meaning in an immediate communicative situation which entails the mental processes involved in making sense of the world in order to decide what action/expression might be appropriate in a given situation (see Lehman, 2015).

It is clear that applying a communication-sensitive perspective to the analysis of scientific discourse requires a consideration of social, cultural and historical factors that have influenced the development of academic discourse patterns entrenched in the intellectual traditions of different cultures. These issues have been considered in Intercultural Rhetoric (IR) research which, more extensively than its earlier incarnation: Contrastive Rhetoric (CR), has built a case for how to carry out a contextualized study of rhetoric, without static and limiting

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1. The terms were coined by Bronisław Malinowski (1935) and used in his anthropological research. In linguistics they were first used by Firth (1957), whose work was developed by Halliday (1978, 1994; with Hasan, 1989).

overgeneralizations about the influence of linguistic, cultural and educational backgrounds on second language (L2) writing. A tangible product of intercultural research is a dynamic model of L2 writing proposed by Matsuda (1997), in which the writer's choices, among other things, are influenced by more immediate contextual sources, which include, "variations within his or her native language (i.e., dialect) and culture (i.e, socio-economic class), his or her knowledge of the subject matter, past interactions with the reader, and the writer's membership to various L1 and L2 discourse communities" (Matsuda, 1997, p. 53).

While acknowledging the importance of the scope and objectives of IR research for teaching L2 (second language) student writing, they do not adequately address the practices of scholarly writing, especially in some smaller national cultures as are found in Central and Eastern Europe. Such practices are based on established traditions and historical assumptions on how academic texts are constructed.

While writing instruction, informed by rhetoric, has been a principal feature of college education in the US since the beginning of the 20th century (Berlin, 1987, p. 2), it does not have its equivalent importance in Central and Eastern Europe, leading to a lack of clear standards for writing. This difference needs to be a major consideration in the complex and multilayered notions surrounding intercultural rhetoric where particular culture-specific sensitivity is required.

The above issue has been overlooked in the current IR theory, which in its determined attempt to avoid oversimplification and essentialization, fails to consider the powerful influence of the scientific stereotype that still exists in smaller cultures, including Central and Eastern European cultures. Its existence can be explained by (1) Vassileva's (2000) observation that small and more homogeneous cultures seem to be more coherent in their efforts to preserve cultural identity and independence, including general ideas on the purpose

of scientific discourse, and (2) the fact that these cultures do not have a tradition of academic writing, but only a collection of preconceived assumptions that govern how authors deal with this phenomenon. In their profound analysis of the relationship between cultural values and academic writing patterns, Czech linguists, Čmejrková and Daneš (1997) argue that the main purpose of academic discourse which, due to the direct historical contact with German thinking, navigates Czech, Polish and Russian scholarship is to provide readers with the following:

1) knowledge, theory and stimulous to thought (adopted directly from German tradition);

2) gnomic statements of truth and general knowledge (developed in Russian tradition);

3) text attractive to the reader due to the use of the contemplative, narrative and story-like (almost 'detective') features (most appreciated in Czech writing).

These objectives are typically attained by making use of face-saving devices, adopting defensive positions, avoiding revealing the ultimative thesis and goals in order not to be charged with the responsibility for potential misreadings of the textual content (Čmejrková, & Daneš, 1997, pp. 42–44).

Identifying a cognitive framework to explain voice construction in scientific discourse

Although the basic processes of perception are shared by all humans, the content differs due to variations in beliefs, values, worldviews and individual inference habits. The open-ended *cognitive framework* I intend to consider here consists of different aspects of scientific stereotype which are the products of human mind, and include the existing knowledge as well as belief and value systems, described, classified

and compared in a way that allows for more informed voice analysis. Specifically, I focus on two aspects of scientific stereotype; namely the purpose and method of communicating content in Polish and Anglo-based academic writing. This is by no means an exhaustive list but the one that initiates a certain direction for further research into voice perception and production across cultures and academic disciplines.

What I term a scientific stereotype in this paper refers to a specific, *stereotypical vision of scientific writing* produced by an intellectual tradition of a given culture. It strongly influences, perhaps with the exception of scientific outputs in the area of English Philology, the preferred patterns of scholarly ideation, research tools and methodologies as well as academic register and textual structure. In this way, a scientific stereotype that persists in a given discourse community affects how research is done and reported.

To operationalize this perspective, I draw on the concept of schema (or schemata) from Cognitive Rhetoric (e.g., Browse, 2019; Cherry, 2019) and the concept of stereotype as used in Social Cognitive Theory (e.g., Bodenhausen, & Macrae, 1998) and explained by Linguistic Expectancy Bias (LEB) (e.g.,Wigboldus, Semin, & Spears, 2000).

In Piaget's theory (1936), a schema is both the category of knowledge as well as the process of acquiring this knowledge. One way to see how this view can be conceptualized in written discourse is to look at the ways cultural variables, constituted by belief systems which lie at the core of human thoughts and behaviors, affect what is perceived by authors as important and how it is interpreted and reported. Beliefs form the basis of our values which have prescriptive and normative dimensions, specifying what is right and what is wrong in a particular context, and are therefore subject to cultural bias and stereotyping. In particular, social schemas (Cherry, 2019), which include basic knowledge about social interactions, allow for assimilation of new information

into already existing, culturally-bound, structures of knowledge and thereby, profoundly affect the process of communication.

The use of social stereotypes as a basis for judgments and behavioral decisions has been also a major focus of Social Cognitive Theory and research. Specifically, the enquiry into motivational and cognitive influences on stereotyping , including such theoretical and empirical areas of social cognition as the interpretation of new information, memory and retrieval processes, impression formation, the use of heuristic vs. analytic processing strategies, the role of affect in information processing, and self-esteem maintenance, has important implications for the research into voice perception and construction. In particular, the Bodenhausen and Macrae's (1998) investigation offers an effective theoretical framework that accounts for the processes that underlie both the activation of stereotypes and difficulties with suppressing their influence.

The stereotype activation and suppression mechanisms, working on the principles from Social Cognitive Theory, allow us to explain how stereotypical, culture-bound expectations may affect authorial voice perception and production (see Čmejrková & Daneš's arguments in the previous section). These expectations enable interlocutors to draw specific inferences during the process of communication which requires a mediation between behaviours which are congruent with the culturally sanctioned stereotype and those which are not. How the role of stereotype in any type of communication, including written discourse, can be analyzed has been also captured in Linguistic Expectancy Bias (LEB) and explained in its context by Milanowicz and Bokus:

> Komunikacja jest głównym motorem napędzającym tworzenie i podtrzymywanie wspólnie podzielanej i powielanej wiedzy, przekonań oraz stereotypów. W procesie tym język odgrywa kluczową rolę, odzwierciedlając oczekiwania nadawcy względem odbiorcy oraz

stanowiąc źródło informacji o stosunku do drugiej osoby (zob. Kurcz, 2005). Językowa asymetria (ang. *linguistic bias*) jest defniowana jako „Systematyczna różnica w doborze słów, będąca funkcją kategorii społecznej, do której przynależy określony obiekt wypowiedzi" (Beukeboom, 2014, s. 314). Perspektywa lingwistyczna zakłada więc, że informacje stereotypowo spójne są inaczej komunikowane […] [niż pozostałe informacje].

(Milanowicz, & Bokus, 2020, p. 55)

Communication is the main driving force behind the creation and maintenance of shared and transmitted knowledge, beliefs and stereotypes. In this process language plays a key role, reflecting the sender's expectations of the recipient and as a source of information about her/his attitude towards the other person (see Kurcz, 2005). *Linguistic bias* is defined as "Systemic difference in the choice of words, which is a function of the social category to which a specific object of expression belongs" (Beukeboom, 2014, p. 314). Therefore, a linguistic perspective assumes that stereotypically consistent information is communicated differently […] [than other information].

(Translation mine)

Considering the above, it is clear that in search of effective tools to analyze voice, it is not sufficient to rely on superficial classifications of rhetorical conventions or descriptors featured in existing voice rubrics that limit voice description to linguistic and rhetorical features visible in the text. Instead, it is necessary to adopt a 'cultural-cognition' approach which enables to understand language and cognition as part of the language-mind-culture triad by situating cognition in socio-culturally determined contexts and investigate cognitive notions, such as stereotypes which are produced within these contexts.

Stereotypes can be seen as building blocks of linguistic form as they help to organise and categorize the world with mental processes which are predictable and therefore easy to manage. As Zinken points

out, "*stereotypes* are not an unstructured sum of knowledge fragments, they are organized in *aspects*. Some of the aspects forming a stereotype are more salient than others in linguistic activity, which is captured by the notion of *stereotype profiles*. A profile in this terminology is a specific actual (e.g., textual) organization of the stereotype knowledge giving salience to particular aspects [...]" (2004, pp. 116–117). In the case of scientific writing we may consider a variety of different aspects which may include, but are not limited to, the following; (1) the purpose of communicating content; (2) the method of communicating content; (3) the manner of modeling the discourse phenomena; (4) the gradient of creativity/ technicality in writing; (5) and the approach to academic language.

I argue that the above examples of scientific stereotype are perceived, although usually not consciously, by the members of a given disciplinary community as important, if not critical, in authorial self-representation. They function simultaneously in any academic text as both subjective realizations of knowledge in macro-narratives and as objective actualizations in micro-narratives. Scientific discourse in macro-narratives is characterized by cognitive independence, which indicates a return to the archetypal condition of cognition: mental activity carried out independently. These facets are linked to the Cartesian model of scientific discourse (see Descartes, 1969) which supports individual, rational, context free, abstract and universal acts of cognition. Conversely, the reproduction of knowledge in micro-narratives refers to social and contextualized aspects of the text which, apart from supporting the tenets opposite to the above, are more open to the elements adopted from non scientific discourses, and correspond to non-Cartesian paradigm of scientific discourse (see Lehman & Hyland in the preface to this volume).

The synthesis of different aspects of scientific stereotype, both those proposed in this paper and those to be added, supported by the

explanation of their functions as both objective concepts of knowledge in macro-narratives and as subjective elements operating in micro-narratives may lead to many valuable insights into the nature of scientific discourse across cultures and disciplines.

Textual realization of scientific stereotype

In exploring variation in authorial self-representation in scientific discourse, the following relations have been found: authorial involvement and detachment; power and solidarity; face and politeness (see Duszak, 1997, p. 2), which undermine the concept of a universal scientific language devoid of cultural influence in the presentation and diffusion of knowledge.

Guided by this observation, I intend to compare how Polish scientific discourse, as compared with English, operationalizes the *stereotypical vision of scientific writing*, keeping in mind that *stereotypes* are understood here as a sum of interrelated *aspects* which consist of *profiles* (see table 1).

Table 1. Selected aspects of scientific stereotype and their profiles in Polish and English

Stereotype aspect	Stereotype profile in Polish	Stereotype profile in English
(1) the purpose of communicating content	demonstration of author's knowledge	successful communication with the reader
(2) the method of communicating content	digressive, monologic, contemplative, tentative declarations	linear, dialogic, expository, assertive declarations

The above table was constructed on the basis of findings from small-scale, though still important, Polish/English contrastive studies, which centre on text organization and broader perceptions of discourse, e.g., textual organization patterns (Duszak, 1994; 1997; Golebiowski,

1998; 2006) and dichotomy between writer's and reader's responsibility in Polish and English students' texts (Salski, 2007). The major inspiration for the current discussion was Duszak's seminal 1994 study in which she compared Polish and English research articles from the field of language studies. Duszak found that English authors presented their ideas in a direct, assertive, positive and explicit manner while Polish authors expressed their thoughts in indirect, affective, and tentative statements. Furthermore, Polish writers tended to adopt defensive positions as if they anticipated potential criticism and questions.

In the first aspect of the scientific stereotype, *the purpose of communicating content*, the difference is that Polish academic writers, in contrast to their English-speaking colleagues, value the depth and the richness of the content of their works more than a clearly structured form (see Golebiowski and Duszak above). This rhetorical style of abstract theorising, which is still present in Polish scientific publications, was first described by Polish philosopher Tatarkiewicz in the 1930's. In discussing European academic culture[2], Tatarkiewicz (1937) affirmed that its main goal is to search for truth, irrespective of practical applications. This tendency can be illustrated by the choice of research fields by Polish linguists, which include syntax, word formation, onomastics, language theory grounded in structuralism, all of which focus on theoretical aspects of the discourse phenomena. The lack of focus on pragmatic aspects of discourse analysis was also observed by Duszak, who points out that "little recognition is given to the interactive properties of texts, academic texts included" (Duszak, 1997, p. 30). In contrast, Anglo-based research concentrates mainly on empirical enquires, with the aim of practical application. Conducting a large-scale research in such areas of scientific

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2. *Academic culture* can be defined in terms of an organization comprised of values which integrate the ethos of science with the axiology of higher education (Sułkowski, 2016, p. 7).

discourse as L2 writing; academic writing; English for academic purposes; voice and identity in written discourse; discourses of culture, English in the world (see e.g., Hyland, 2009; 2012; Holliday, 2011; 2018) with the applicable potential of research findings, has no real equivalent in Polish research.

The degree of attention paid to the readers' needs is a determining factor in the way of communicating content and can be analysed under the next aspect of scientific stereotype; namely, *a the method of communicating content* which encompasses the following profiles: digressive vs linear, monologic vs dialogic, contemplative vs expository, tentative vs assertive declarations.

The *stereotype profile: digressive vs linear* reveals the differences in the way writers choose to structure the development of the textual themes in Polish and English scientific discourse. What is reasonable and acceptable as a convincing style of argumentation depends on the intellectual tradition of a given writing culture. In Polish scientific discourse, detours from the main thematic path are perceived as manifestations of a way of thinking which is capable of pulling together a variety of areas of knowledge and makes digression a style marker of the Polish academic writing tradition.

'Digressive' style is not unknown in English scientific writing (at least in essayistic style), but it is far from being included in the 'canon'. In pursuit of successful communication, the English academic writer views digressions as signs of a distracted and rambling style. In this digressive vs linear prose some cracks are becoming visible, due to some translations of very digressive "Teutonic" texts, for example, Žižek's philosophical texts. Nevertheless, the opposition persists, and with some exceptions, it still provides guiding policies for most journal's, which demand the application of very rigid formula in the construction of a text.

The study carried out by Golebiowski (1998) points to different preferences for linear or digressive progressions in how ideas are

developed in Polish and English academic texts. The text corpus consisted of the introductory sections of articles published in professional psychological journals written in English and Polish by Polish scholars. Golebiowski has identified the following reasons for digressions in the introductory sections she examined:

> to present background information; to review previous research in terms of rhetorical and empirical evidence; to consider various theoretical and philosophical issues; to develop and clarify concepts; explain terminology; and to justify the author's own research or methodology. Authors tend to enter into scholarly discussions, introduce their own philosophy or ideology, or explain why other issues have not been covered or explored

> (Golebiowski, 1998, p. 74).

In her 2006 study, Golebiowski investigated three articles from the field of sociology written by (1) several English-speaking writers within their native academic discourse community, (2) a native speaker of Polish from the English discourse community and (3) a Polish-speaking author from her native discourse community. She found that native English authors ensure the guidance of the reader through the argument and stages of the argumentation, thereby achieving dialogicality in the discourse. The text written by the Polish author for the Polish audience more resembles a monolog, with the author being more concerned with demonstrating her/his knowledge rather than aiding the readers' understanding of the content of the text. Golebiowski's conclusions confirmed the results of her earlier study that content and form are not equally valued in the Polish rhetorical tradition because "the evidence of the possession of knowledge is considered far superior to the form in which it is conveyed" (Golebiowski 1998, p. 85). Both studies demonstrated that Polish academic discourse features "branching" progressions in the development of ideas whereas the

Anglo-based rhetorical tradition values clarity in the organization of thoughts and shows sensitivity to the reader's needs.

Studies by Duszak (1997) and Golebiowski (1998) concentrate on digressiveness which has been classified as a predominant style marker of Polish academic writing. Duszak divides digressions in Polish academic texts into two major groups: digressions proper and elaborations. She describes "digressions proper" as "discourse segments which are low in thematic relevance to what is in focus" that may "range from single phrases to entire paragraphs." She calls elaborations "thematic inserts that dilute the focus" (1997, p. 328). To her, they are additional meanings that appear in a text as explications, amplifications restatements, reformulations, clarifications to what has already been previously said or implied. Both digressions proper and elaborations contribute to a higher level of redundancy in a text.

In his enquiry into reader consideration in Polish and English academic essays written by tertiary-level students, Salski (2007) identified the following constituents of writer responsibility in an English academic text: explicit thesis statement, deductive text organization, use of sufficient transitions, precise and concise language and unity of paragraphs. This is in stark contrast with Polish text characteristics of academic discourse, which include reader-responsible style: inductive text organization, arbitrary paragraphing without topic sentences, wordy and vague style, and frequently absent transitions (Salski, 2007, pp. 256–258).

Another *stereotype profile: monologic vs dialogic* marks a further difference in preferences for academic discourse style. Monologic, or contemplative discourse, used to narrate science in German, Russian, Polish and Czech, is typically associated with 'Teutonic' rhetorical style. Academic texts written by Polish authors for a Polish audience typically resemble a monologue, in that the writer appears to be more concerned

with conveying knowledge through her/his command of highly sophisticated language rather than ensuring the readers' understanding of the textual content. Polish academic writers are expected to "indulge more in the acts of creative thinking, and to endeavor more to produce them in the name of science and for the sake of truth, than to report them for the reader's joy and benefit" (Duszak, 1997, p. 13). This contrasts with the dialogic style characteristic of English scientific discourse, which is by its nature interactive, and thereby, reader-considerate. The dialogic effect is achieved through the application of a variety of organizational relationships which function as a substitute for dialogue with the audience and is achieved in large part through the employment of meta-textual cueing (i.e. staging through careful paragraphing and signposting through the use of transitions), the distribution of salience, following on from the initial thesis statement, and the use of concise and precise language.

Various levels of commitment to and responsibility for the knowledge and belief claims is captured in the *stereotype profile: tentative vs assertive declarations*. As an journal editor for eight years and having peer-reviewed scores of academic articles, it is clear to me that typical Polish scientific discourse is not assertive. Although different disciplinary communities may demonstrate different levels of tolerance for assertiveness in writing, I have observed generally tentative assertions ("I attempt to explain that", "This may be the reason") in articles of Polish authors written in English, as opposed to assertive declarations ("I explain that", "This is the reason"), typical of mother-tongue English writers. This may show (sic!) that Polish academia is less supportive of assertive and explicit knowledge, and belief claims. Such deviations from the rhetorical norms of Polish scientific discourse become an issue of a struggle for power inevitably won by those who hold institutional power. It follows then that the discipline's discourse

community's judgement of the text is critical in establishing the writer's status/position in said community. Evidently, this is an area of Polish academic discourse which needs to be researched.

Conclusions

The cultural-cognitive approach to scientific discourse presented in this paper views culture-bound aspects of scientific stereotype as having significant impact on voice construction in writers' native and non-native languages. It has been shown that the selected aspects of this stereotype correspond to respective discourse conventions and produce normative standards regarding what makes an academic text valuable and ultimately, affect such aspects of the text as linearity and complexity in the form and presentation of content, degrees of explicitness, digressiveness and distribution of salience.

The research into how much scientific writers draw on the aspects and profiles of scientific stereotype in the construction of their knowledge and belief claims will undoubtedly reveal how ingrained they are in the individual writer's cognition. Specifically, do these stereotypes only affect the social aspects of voice realized in micro-narratives or do they penetrate further to influence the manifestation of individual writer voice in macro-narratives? In other works, to what extend do academic outputs show cognitive independence and to what extend do they manifest the social anchoring of the author? How does it differ across cultures and academic disciplines?

In order to answer the questions posed at the beginning of this paper; namely, (1) what kind of international academic communication is possible and desirable? and (2) how can EAL scientific writers from Poland ensure that they integrate and remain their integration in the world of international scholarship?, we need to consider establishing

practical, relevant and realistic framework to analyse voice which is descriptive but not prescriptive in nature. This will enable Polish and other Central and Eastern academics to align their scientific writing to the global use of English in academia. By no means is this an easy task as an academic text written in English needs to be aligned in terms of structure and register as imposed by disciplinary and social norms. However, this requirement creates significant language barriers for the majority EAL writers as they need to wrestle with their native cultural and institutionally acquired thought patterns in their texts. Papers which stray far away from the dominant Anglo-based stylistic norms are likely to face rejection or constant pleas for revision, or editing, which could eventually lead to the loss of the writer's initial intention. One possible way to enable EAL writers to maintain and improve their presence in the world of scholarship is for them to be aware of the dominant rhetorical norms which govern international scholarship today and for publishing houses to respect cultural-cognitive differences and their manifestations in text.

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