The Effects of Globalisation of Science on Polish Academic Discourse: Tracing a Rhetorical Change

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Abstract The spread of English as the global language of science has been found to affect academic communication in many national languages. This study reports on a change in the rhetorical structure of introductions to Polish-language journal articles that can be attributed to the growing exposure to English discourse patterns. On the basis of data drawn from a corpus of 150 introductions to linguistics articles published across 30 years, it examines the rhetorical organisation of Polish texts, showing that they assume features so far considered characteristic of English-language introductions and largely absent from academic Polish. The analysis shows in particular that the majority of Polish linguistics articles are now divided into sections, that the statement of research goals has become a stable rhetorical move in Polish introductions, and that its direct and cyclical realisations are becoming increasingly popular. These features make the structure of Polish article introductions less culturally distinctive and more similar to that of English-language texts.

Key words: academic discourse, CARS model, globalisation, introductions to research articles, Polish, rhetorical change

1 Introduction

With the increasing exposure to English in academic settings and the pressure to publish internationally, some elements of text organisation and rhetoric characteristic of English scholarly communication have been found to make their way into other languages, which so far preferred other, more culturally distinctive forms and patterns (cf., e. g., Haarmann/Holman 2001 for Finnish, Bennett 2014 for Portuguese, Dontcheva-Navratilova 2014 for Czech, and Solli/ Ødemark 2019 for Norwegian). In Polish, the structure of journal articles has been known to differ substantially from that typical of English-language articles. In one of the first contrastive studies on English and Polish academic discourse practices, based on data from the years 1975–1992, Duszak (1994) demonstrated that Polish authors used different introductory strategies than their Anglophone colleagues and, compared to English authors, preferred more indirect and tentative language forms. Studies that followed (Golebiowski 1998, 1999) confirmed Duszak's conclusions that Polish and English academics used different writing styles and that the rhetorical and informational structure of article introductions in the two languages differed considerably. However, recent changes in academic communication, in particular the internationalisation of higher education and scholarship and the growing recognition of the role of English as an international language of science and technology, have not been without consequence for academic Polish.

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Although the influence of English academic discourse patterns on Polish academic discourse has not been a subject of a separate study, some relevant observations have already been made. Duszak/Lewkowicz (2008: 110) report that academic Polish is said "to imitate English when it comes to text formatting, level of interactiveness and style," which is becoming more accessible and direct. In his comparative study of evaluation markers in Polish- and English-language scientific articles, Kowalski (2014) observes that the differences, well-visible in older texts, tend to converge in more recent ones. Another comparative study, based on data from the years 2001-2006 (Warchał 2018), has shown that Polish and English article introductions are less dissimilar than might have been expected on the basis of previous research. Brought together, these observations point in one direction: there are processes underway which make academic Polish less culturally distinctive. What is missing is a closer analysis of the changes that have taken place in Polish academic discourse over the past 30 years, an eventful period in this part of the world, marked, on the one hand, by a political transformation that brought new possibilities for research funding and international cooperation between higher education institutions, and on the other, by a rapid increase in the role and presence of English in the public sphere, education system, and research. This paper addresses this issue by looking into a rhetorical change that has been taking place in the organisation of introductions to Polish-language linguistics journal articles, setting it in the context of the growing role of English. The study is based on three sets of articles published in the years 1987–1991, 2001–2006, and 2016-2018. Informed by the genre analysis framework (Swales 1990, 2004), recent studies on English for research and publication purposes and its socio-political implications (Ammon 2001, Curry/Lillis 2004, 2013, Ferguson 2007, Englander/Corcoran 2019), and document analysis of recent evaluation policies in Poland, it demonstrates that the rhetoric of Polish academic articles is influenced by rhetorical patterns characteristic of English, which results in gradual levelling of cultural differences between research articles in English and in Polish.1

This article is organised as follows: Section 2 discusses the role of English in academic communication with a particular focus on the situation in Poland. Section 3 outlines the characteristics of academic Polish and summarises the major points of difference between Polish and English academic styles. Section 4 gives the background for the study, Section 5 presents and discusses the results, and the final part offers some concluding remarks (Section 6).

2 English and global academic communication

Since World War II, the rise of English as a global language of science and technology has become a self-accelerating process (Crystal 1997/2003). As Kaplan (2001) notes, since much of the research work in the second half of the 20th century was done in English, information on the most recent results was also made available in this language. As early as in the 1970s, many scientific journals world-wide started switching to English (Swales 2004: 34), a process that was initially characteristic of medical sciences but soon spread to other fields. As a result, Kaplan (2001: 12) reports that in some European countries, scientific journals carry more English-language than national-language content. Additionally, since the late 1960s, information sharing has been increasingly connected with the development of the Internet (originally serving American governmental and academic institutions and hence, English-based) and, since 1989, with the expansion of the World Wide Web, hailed as the beginning of a new era in hu-

Partial results of this research were presented at the 14th ESSE Conference in Brno, 29.08.–02.09.2018.

man communication and data accessibility (Crystal 1997/2003, 2001, Kaplan 2001). In Europe, the role of English in academic settings was reinforced in 1984 by establishing the European Academic and Research Network (EARN), a project which in 1991 began its expansion to the Eastern Bloc, including Poland (Kirstein 2004).

An additional impetus came with the Bologna Declaration (1999), aiming to consolidate higher education in Europe by promoting student mobility and increasing the attractiveness and global competitiveness of European higher education institutions. Although the document was explicit about respecting the linguistic diversity of Europe, the objectives it set out fostered the idea of a common language. Given that English is spoken by about a quarter of the world's population (and, according to figures for 2002, by nearly half of European Union citizens), the choice, as Björkman (2013: 14) puts it, was natural. Establishing the European Higher Education Area (EHEA) in 2010 further sealed the role of English as a language of instruction in the academia and as an entry pass to the international academic job market (Anderson 2018: 104), a role well illustrated by the rise in English-medium courses offered in non-Anglophone European higher education institutions and the figures for academic staff and student mobility.

Shortly after the Bologna Declaration, in 2000, the European Research Area was established to enable "free circulation of researchers, scientific knowledge and technology" (European Commission 2020) and a large-scale cooperation between scholars and institutions based in different countries. Globalisation of science involves various pressures and motivations to publish in English, and to publish internationally. Naturally, sharing research results in an international language helps to get in touch with fellow experts working on similar problems and thus to start cooperation on more challenging research projects. Other considerations are directly tenure- and funding-related. Faculty evaluation systems reward scholars for publishing in journals included in high-status citation indexes, where English-language journals predominate (Curry/Lillis 2004, Pérez-Llantada 2018), and publishing in highly ranked venues has become one of the main criteria (if not the most important one) for promotion and research funds allocation (Duszak/Lewkowicz 2008, Curry/Lillis 2013, Englander/Corcoran 2019). On the national level, evaluation of research institutions and their funding are to a large extent based on the quality of research, with the most important measure being the number and "weight" of internationally indexed publications (Gazzola 2012, Curry/Lillis 2014). Finally, competing for national and international funding often involves bibliometric indicators of the researcher's productivity, such as the citation score measured by abstract and citation databases. Again, the most widely-used and prestigious ones, including databases offered through Web of Science, Scopus, and Google Scholar, tend to underrepresent publications in other languages than English (Gazzola 2012, Mongeon/Paul-Hus 2016), which may be another argument for scholars to share their research in this language.

With its system of evaluation of higher education and research institutions, Poland is no exception in this respect. Since 2018, the weighting of the criterion of research quality has been tied to the field and ranges from 50 % for engineering and technology, through 60 % for natural, medical, and health sciences, to 70 % for humanities and social sciences, with the benchmarking system based on the points earned by a fixed number of top-ranked publications per research faculty member.² This illustrates that the pressure on academics to publish

² Cf. Regulation of the Polish Minister of Science and Higher Education of 22 February 2019 (Journal of Laws 2019, item 392).

in high-impact international journals has become an element of the state science policy. Publishing internationally and a rich citation record are also critically important in competing for funding from national and international grant-awarding bodies. For instance, final decisions concerning the allocation of research grants from major funding schemes of the Polish National Science Centre (NCN) are based in 40 % on research achievements of the principal investigator, with the evaluation criteria referring specifically to the investigator being "internationally recognised in the field" and to publications in international academic journals "of the highest rank" (NCN 2020). The internationalisation of research and research evaluation procedures is also underscored by the fact that the key sections of research grant proposals submitted to the Polish NCN under the most popular funding scheme (including short and full descriptions of the project) are now submitted in English only. Reactions to this omnipresence of English and evaluation systems that reinforce its dominance have been varied. First, scholars based in non-English speaking countries face additional difficulties connected with writing up their research, which means that the process of preparing a manuscript for publication is more time-consuming, effects less satisfactory, and additional costs often involved, in particular, related to editing or translation services (Curry/Lillis 2004, Li/Flowerdew 2007, Flowerdew 2008). This may give rise to negative attitudes, as some scholars consider themselves suffering from language-based disadvantage in publishing when compared to Anglophone authors (Duszak/Lewkowicz 2008, Ferguson/Pérez-Llantada/Plo 2011), especially in regions where the average level of competence in English is lower or where other non-linguistic inequalities come into play (Ferguson 2007).

Second, English-medium international journals are not always perceived by authors as interested in publishing research on locally important topics or based on local data (Curry/Lillis 2004, Duszak/Lewkowicz 2008), a problem more often raised by scholars in the social sciences and humanities. These scholars find the evaluation systems based on English publications particularly unfair and in general detrimental to research which is highly relevant on a national or regional scale but unlikely to draw readers globally. For instance, writing from the Polish perspective, Ostrowski (2020) points out that in some disciplines, such as art history, English cannot be regarded as the dominant language; rather, there are several leading languages (including German, Italian, French, or Russian) strictly related to specific research areas, an observation that will also be valid for philosophy or history. Most importantly, however, he argues that in such disciplines, "detailed local studies must remain the domain of the national language, while granting disproportionately high point awards for publications in English may result in a crisis or even a loss of this much-needed research category" (Ostrowski 2020: 50 f., own translation, KW).

Third, in the long term, incentives to publish in English may result in domain loss, with national languages relegated from the prestigious discourse domain of academia (but also, e. g., higher education or business) to strictly everyday contexts, a problem discussed in detail in Ferguson (2007). For example, Murray and Dingwall (2001) discuss the position of English at Swedish universities in terms of developing diglossia which may lead to the marginalisation of the national language, especially in some sectors of academic communication. In the context

[&]quot;W moim głębokim przekonaniu szczegółowe badania lokalne muszą pozostać domeną języka narodowego, a przyznawanie nieproporcjonalnie wysokich gratyfikacji punktowych za prace anglojęzyczne może doprowadzić do kryzysu, a nawet zaniku tego bardzo potrzebnego segmentu badań" (Ostrowski 2020: 50 f.).

of Swedish higher education, such concerns have been expressed by a significant percentage of students and faculty (Bolton/Kuteeva 2012), and in the sub-domain of scientific publishing in Norway, this process is already advanced (Ljosland 2007). Similar observations have been voiced by some Hungarian scholars (Medgyes/László 2001).

In Poland, as Dubisz (2011) points out, language policy in the first decade of the 21st century was dominated by globalisation, with English enjoying a special status in many discourse domains, including academia. Among scholars, resistance towards globalisation through English is connected primarily with the benchmarking system that is perceived as unfair by privileging publications in English and treating those in Polish as of lesser value (Duszak/Lewkowicz 2008), a problem identified as "linking the value of a source of information with the language of its publication" (Nowak 2015: 35, own translation, KW). While not directly perceived as a threat to academic Polish, this situation may be disconcerting, especially from the point of view of the humanities and social sciences. The authors of an assessment of the current situation in Poland in the area of philologist education express these concerns in the following way:

The assumption that English is the only true language of science is not only mistaken but also dangerous, because it may entail far-reaching consequences: a language which is not used to analyse new problems and does not assimilate new research methods loses its conceptual cognitive efficiency and is soon deprived of the ability to enter into a dialogue with the knowledge articulated in other national languages, and to express national, social, and personal self-knowledge. (Budrewicz et al. 2010: 18, own translation, KW)

This corresponds particularly well with Bennett's account of epistemicidal processes (Bennett 2007, 2013), which involve a progressive impoverishment of the conceptual infrastructure in a national language, depriving it of the ability to generate, express, and disseminate knowledge based on the history and experiences of a particular language community.

The expansion of English in Polish academia in the 21st century is beyond dispute although, much like in other non-English speaking countries, the intensity with which its effects are felt and the emotions that accompany this process depend on the discipline. Most academics in Poland have contact with publications in English in their areas of knowledge, as they need access to most recent findings; likewise, most of them rely on English-language databases and abstracts to find relevant information. Many Polish scholars have realised that they need to publish internationally and, if they have not done so already, they declare that they plan to (Duszak/Lewkowicz 2008). These regular contacts and motivations may be expected to have some influence on their academic Polish: the structure of the text, distribution of information, rhetorical choices, and phraseology. The next section outlines the most characteristic features of Polish academic language, setting the scene for discussing some areas where changes have been observed.

⁴ "powiązanie wartości źródła informacji z językiem jego wydania" (Nowak 2015: 35).

[&]quot;Założenie, że jedynym prawdziwym językiem nauki jest język angielski, jest nie tylko błędne, jest wręcz groźne, może bowiem pociągnąć za sobą daleko idące konsekwencje: język, którego się nie używa do analizy nowej problematyki, który nie asymiluje nowych metod badawczych, traci pojęciową wydolność poznawczą i szybko przestaje być zdolny do dialogu z wiedzą wyartykułowaną w innych językach narodowych, a także do wyrażania samowiedzy narodowej, społecznej i jednostkowej" (Budrewicz et al. 2010: 18).

3 Polish academic discourse and Polish-English contrastive studies

Early beginnings of scientific Polish go back to the 16th century, but it was only in the second half of the 18th century that the academic variety of Polish was formed and began to be widely used in scholarly texts, textbooks, and popular science (Gajda 1990, Bajerowa 2008). According to Gajda (1990), in the times of the Enlightenment, almost 60 % of books by Polish scholars were published in Polish, including the most important, formative works for this period. This rapid development and expansion of academic Polish was part of a defensive strategy and service that scholars felt they owed to their country: Poland at that time did not exist as a state, so educating people in their language and cultivating interest in Polish literature and culture became a mission and an important element in the struggle for independence. Additionally, special consideration for high academic style and linguistic elegance was connected with the need to preserve the prestige of Polish, which in the times of partitions was suppressed and largely wiped out from public life (Gajda 1990, Dubisz 2011). As a result, academic Polish was construed as a token and carrier of national identity, a variety that was expected to differ from the everyday usage and that was itself a value to be cherished.

In macro-cultural terms (Galtung 1981), academic Polish falls within the Teutonic intellectual tradition, marked by such elements as contemplative rhetoric, digressiveness, intellectualisation of argumentation, emphasis on methodological discussions, and special interest in theoretical considerations (Clyne 1987, Kaplan 1987, Duszak 1994, 1997b), with relatively little attention being given to a reader-friendly organisation of the text and cohesive devices that support it. This is why Polish academic texts may give the impression of being difficult to read, dense, and elitist, that is, designed to be read by a narrow circle of experts. This tradition stands in contrast to the Saxonic intellectual style, exemplified by academic English, which favours dialogic rhetoric, linearity, clarity of exposition, and problem-focused argumentation supported by presentation of data, with a rich repertoire of devices that assist the reader in following the author's line of thinking (Galtung 1981, Kaplan 1987). In Hinds' (1987) terms, Polish academic texts will be classified as reader- rather than writer-responsible, with the primary responsibility for understanding the author's ideas falling with the reader.

Polish-English contrastive studies in the area of academic discourse point to the following elements in the organisation and rhetoric that make Polish texts different from those published in English. Polish articles often lack explicit division into sections (Duszak 1994, Golebiowski 1998); they tend to be digressive, with digressions often coinciding with elaborations of the topic (Duszak 1997a). The goal of the article is rarely explicitly formulated in the introductory part, and if it is signalled, it is downgraded by the use of indirect or tentative forms (Duszak 1994). Instead of declaring the purpose of the study, Polish authors often adopt a defensive position and declare what they do not intend to do (Duszak 1994). Also, in the introductory parts, they seem to attach relatively more importance to the description of the conceptual-terminological apparatus that forms the basis for the research (Duszak 1994, Golebiowski 1998). As a rule, Polish authors do not outline the structure of the paper in the introduction or announce principal findings (Golebiowski 1999). If criticism of other research is involved, Polish authors often apply face-saving devices to mitigate the negative comments (Duszak 1994), observations confirmed also by other studies into academic Polish (Wojtak 1999). Additionally, some observations have been made with regard to the strength of claims and the author's presence in the text. For instance, Wojtak (1999) demonstrates that Polish academic authors often use such defensive strategies as 3rd person singular forms referring to the author and expressions limiting the author's commitment to a claim. They have also been shown to use considerably fewer markers of certainty than English authors (Warchał 2015).

Irrespective of these well-attested areas of incompatibility, some signs of a forthcoming stylistic change in academic Polish were noticed as early as in the second half of the 20th century. According to Gajda (1999a, b), with the growing role of English in hard sciences, elements of the Saxonic intellectual style started to penetrate into Polish academic texts. Similarly, in the humanities, markers of the Teutonic intellectual style tend to disappear in time, replaced by elements of the Anglo-American style (Gajda 2001). These trends coincide with such processes in literary Polish as democratisation and deelitisation of language, and with mutual influences between registers, all of which are also visible in the area of scholarly communication (Gajda 2001). Up to now, though, no attempt has been made to investigate these transformations across groups of texts produced within particular disciplines at various points in time. The project the results of which are presented here aims at documenting some changes in academic Polish that can be attributed to the expansion of English discourse patterns, focusing on the rhetorical structure of introductions to linguistics journal articles. The next section describes the project in more detail.

4 Methodology

4.1 Origins and aims

The need for this study emerged around 2015 during another project, which aimed at a contrastive analysis of epistemic markers used in English and Polish linguistics research articles published in the years 2001–2006. During extraction of the data, it was noticed that the structure of the introductions to Polish texts was not as remote from that accepted in English as might have been expected on the basis of the existing contrastive literature. These intuitions were confirmed in a 2018 study, which focused specifically on the statement of purpose in introductions to Polish and English articles published in the years 2001–2006. While some of the findings coincided with Duszak's (1994) – such as the lack of division into sections in Polish or the preference for the cyclical realisation of the statement of purpose in English-language texts – others did not. In particular, it turned out that Polish authors did not generally avoid stating their purposes in the introductions, although they tended to mitigate the statements, especially using conditional forms or hedges.

These observations prompted the present analysis, which aims at tracing the change that has been taking place in the organisation of introductions to Polish linguistics articles for the past 30 years. The main questions asked are:

- Are introductions to Polish-language linguistics articles becoming rhetorically more similar to English-language introductions?
- If yes, what aspects of their organisation appear to be most affected, and, conversely,
- what aspects remain relatively unaffected or, perhaps, change at a slower pace?

4.2 Material analysed

The study was based on a three-part corpus of 150 introductions (about 76 thousand running words) to Polish-language articles published in widely-recognised Polish linguistics journals: *Acta Baltico-Slavica* (ABAS), *Biuletyn Polskiego Towarzystwa Językoznawczego* (BPTJ), *Et*-

nolingwistyka (EL), Język a Kultura (JK), Onomastica (ON), Poradnik Językowy (PORJ), and Studia z Filologii Polskiej i Słowiańskiej (SFPS). Each of the three parts comprised 50 introductions to articles published in different time frames: 1987–1991, 2001–2006, and 2017–2018, with one journal contributing at most 20 % of the data. The internal composition of the sub-corpora was the same (ABAS–2; BPTJ–7; EL–3; JK–10; ON–8; PORJ–10; SFPS–10). Journals which contributed most articles to the corpus (75 % of the data) are marked by a closer focus on the Polish language and culture, which they approach from different perspectives (JK, PORJ, SFPS, and ON). The remaining 25 % were drawn from journals with a different orientation: theoretical and methodological (BPTJ) and cross-cultural and transnational (ABAS and EL). The texts to be included in the corpus were retrieved electronically whenever possible, but in many cases – especially with older texts – the articles were scanned manually and converted to text files.⁶

Articles in Polish are often unsectioned; in these cases, the introductory part was identified by reading the first half of the paper and deciding on the point of division on the basis of content and metatextual clues. The size of the 1987–1991 sub-corpus (SC1) was approximately 23 thousand running words.⁷ The length of individual introductions varied widely from 66 (SFPS and BPTJ) to 1,331 words (ABAS). The 2001–2006 sub-corpus (SC2) comprised approximately 20.5 thousand running words, with the shortest introduction being 49 (SFPS) and the longest 1,214 words long (ON). The 2017–2018 corpus (SC3) was considerably bigger in terms of word count and comprised 32.5 thousand running words. The shortest introduction was 60 words long, and the longest 2,380 (both from SFPS). There was no direct relationship between the length of the introduction and the journal (in SC3, the shortest and the longest introductions were drawn from the same source).

The difference in the size of the corpora may be related to such factors as word limits imposed by the journals (SC2) and changes in the state evaluation policy introduced in 2012 (SC3), which specified that, to be included in the evaluation report, a publication in the humanities could not be shorter than 20 thousand characters. This regulation influenced submission practices; as a result, articles grew longer, which could have some impact on the length of the introductions.

4.3 Procedure

In the analysis, Swales' (1990) revised Create a Research Space (CARS) model of article introductions was used. The model identifies the major rhetorical moves, further analysed into steps, taken by English academic authors to introduce their texts to the audience (Table 1). It provides a general framework for understanding the rhetorical work that is undertaken in the introduction rather than a hard-and-fast formula for its organisation – some moves are occasionally skipped, their order is not fixed, and their realisations vary – and has proved to be one

The corpus used here is part of a larger bilingual corpus of linguistics journal articles, which I began compiling in 2005. At that time, few of the older texts were available in the digital form. For this reason, an additional factor that had to be considered before scanning was the physical condition of the printed issue of the journal.

All counts were made with WordSmith 5 (Scott 2008).

Cf. Regulation of the Polish Minister of Science and Higher Education of 13 July 2012 (Journal of Laws 2012, item 877). The point concerning the minimum length of a publication was upheld in later regulations and remained valid until 1 October 2018.

of the most useful analytical and pedagogical tools. It is important to note that the model was developed to describe the structure of effective English-language introductions, making no claims to cross-cultural validity. Its later application in contrastive studies (e. g., Duszak 1994, Golebiowski 1998, Sheldon 2011) was secondary and motivated not by the need to explore the organisation of texts in other languages, for which it was unsuitable, but to identify the most salient structural and rhetorical differences between these texts and their English-language counterparts. Apart from contributing to a better understanding of cross-cultural diversity in academic discourse, the results have had important implications for English for Academic Purposes pedagogy and translation: if ignored by writers in English as a second language, the differences might make their texts less effective or even unpublishable. Another possible application of the CARS model outside Anglophone contexts is for identifying the direction of changes within academic varieties of other languages, as demonstrated by Solli/Ødemark (2019). In the present study, much like in Solli/Ødemark's (2019) analysis of Norwegian-language articles, rather than identify the points of difference between two culture-based types of text organisation, the CARS model is used to monitor the changes in Polish article introductions across a set time-frame.

Table 1: The CARS model (Swales 1990)

Move	Steps		
Move 1 Establishing a Territory	Step 1 Claiming Centrality		
	Step 2 Making Topic Generalisations		
	Step 3 Reviewing Items of Previous Research		
Move 2 Establishing a Niche	Step 1A Counter-Claiming		
	Step 1B Indicating a Gap		
	Step 1C Question-Raising		
	Step 1D Continuing a Tradition		
Move 3 Occupying the Niche	Step 1A Outlining Purposes / Step 1B Announcing Present Research		
	Step 2 Announcing Principal Findings		
	Step 3 Indicating RA Structure		

First, the introductions were analysed manually to identify selected features in texts from each sub-corpus. Taking as a point of departure previous reports on the differences between English and Polish introductions, the analysis focused on the following elements: delimitation of introduction, establishing a niche (Move 2), outlining purposes and/or announcing the research (Move 3 Step 1); directness of the statement of purpose (realisation of Move 3 Step 1), cyclical form of the statement of purpose (realisation of Move 3 Step 1), announcing principal findings (Move 3 Step 2), and indicating article structure (Move 3 Step 3). The results are discussed in Section 5.

Next, a statistical analysis was applied to the following variables: delimitation of introduction, establishing a niche, outlining purposes, directness of the statement of purpose, and cyclical form of the statement of purpose. Frequencies and percentages for all categorical values were calculated over the time frames, and the chi-square test of independence was applied. Statistical analysis was performed using STATISTICA software (version 10). A 'p' value of less

than 0.05 was regarded as statistically significant (the 0.05 significance level is commonly used in linguistic studies; cf., e. g., Ferguson/Pérez-Llantada/Plo 2011, Bolton/Kuteeva 2012).

5 Results and discussion

The first part of the analysis has shown that, compared to older data, introductions to Polish linguistics articles published in recent years (SC3) more often display the following features: section delimitation, identification of a research niche, indication of research purposes, direct statement of purpose, and cyclical realisation of the statement of purpose (Table 2). The other two features – announcing principal findings and indicating article structure – have remained peripheral to Polish texts.

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Sub-corpus	SC1 (1987–1991)		SC2 (2001–2006)		SC3 (2017-2018)	
Feature	x/50	%	x/50	%	x/50	%
Delimitation of introduction	12	24 %	12	24 %	31	62 %
Establishing a niche (Move 2)	8	16 %	14	28 %	15	30 %
Outlining purposes / Announcing the research (Move 3 Step 1)	28	56 %	34	68 %	38	76 %
Direct statement of purpose (Move 3 Step 1)	12	24 %	22	44 %	25	50 %
Cyclical form of the statement of purpose (Move 3 Step 1)	2	4 %	5	10 %	12	24 %
Announcing principal findings (Move 3 Step 2)	4	8 %	8	16 %	4	8 %
Indicating article structure (Move 3 Step 3)	6	12 %	2	4 %	3	6 %

As for the division of texts into sections, only about a quarter of the studied introductions were explicitly marked as separate text units in SC1 and SC2. The situation is different in SC3, where over 60% of the articles were subdivided. Apart from the influence of English, where the division into sections is a norm, this particular finding may also be related to the greater length of articles published in the years 2017-2018: in the case of longer texts, the division may have appeared particularly justified.

Move 2, establishing a research niche, while generally infrequent in Polish texts, was found to occur more frequently in articles published after 2001, as demonstrated by an increase from 16 % in SC1 to 28 % in SC2 and 30 % in SC3. Examples (1) to (3) present this rhetorical move as attested in the three sub-corpora. The gradual rise in its popularity in Polish texts may be related to the fact that establishing a niche is a key element in justifying the research in English, much emphasised in study materials for English for Academic Purposes and present in the vast majority of English-language research article introductions. Moreover, a thorough justification of the research, with emphasis on its novelty and originality, is an indispensable component of research grant proposals, often set off as a separate section, so Polish academic authors are increasingly aware of its rhetorical importance.

- (1) Zjawisko to, choć wspominane w pracach slawistycznych (np. Tokarski 1971: 93), nie zostało nigdzie opisane w sposób wyczerpujący, a jest ono znaczące między innymi dlatego, że ustala ... (BPTJ1989-3; SC1) [This phenomenon, although mentioned in Slavonic studies (e. g., Tokarski 1971: 93), has nowhere been described thoroughly; and it is significant because, among others, it establishes ...]
- (2) Choć problem nie doczekał się do tej pory gruntownego opracowania, już na podstawie istniejących studiów wolno twierdzić, że lista zjawisk fleksyjnych ... jest zdecydowanie bogatsza niż sporządzona przez wspomnianych badaczy. (BPTJ2001-10; SC2) [Although so far the problem has not been studied in great detail, even on the basis of the existing studies, it is possible to state that the list of inflectional phenomena ... is considerably longer than that offered by the above-mentioned scholars.]
- (3) Prozatorska twórczość Kochanowskiego jest niedoceniana i rzadko jest przedmiotem badań. (JK2017-3; SC3)
 [Kochanowski's prose is undervalued and has rarely been the object of study.]

With regard to Move 3 Step 1, where the authors outline research purposes, the analysis has shown that, in contrast to what might have been expected on the basis of early studies, this rhetorical element is generally well-established in academic Polish. This is demonstrated by 56 % of the texts in SC1 and a steady rise in the number to 68 % in SC2 and 76 % in SC3. Apart from this rising tendency, some additional trends have been noticed with regard to the preferred realisation. While indicating the research purpose is not a rare move in Polish introductions, the statements are sometimes indirect or tentative, as shown in (4) and (5). Example (4) contains a sequence of expressions limiting the scope of the article and validity of the results ('merely an attempt at capturing,' 'preliminary diagnosis' 'material for verification'); example (5), in turn, opens with a statement of what the author does *not* intend to do and continues with a hedged declaration of what will be covered in the study ('some misconceptions'). Interestingly, in time, the preferences change towards strong, direct formulations, as demonstrated by an increase from 24 % of texts with direct statement of purpose in SC1, to 44 % in SC2, and to 50 % in SC3 (6 and 7).

- (4) Przedstawiony niżej opis jest zaledwie próbą ujęcia semantyki jednego z najistotniejszych słów "nasiennych" Norwida, uchwycenia zrębów autorskiej praktyki semantyzacyjnej, wstępnym rozpoznaniem i materiałem do weryfikacji. (JK1991-3; SC1) [The description that follows is merely an attempt at capturing the semantics of one of Norwid's most important, "seminal" words and grasping the basis of the author's semantisation practice, a preliminary diagnosis and material for verification.]
- (5) W artykule tym nie zamierzam dociekać wszystkich przyczyn obserwowanego stanu rzeczy. Uwidocznię jednak niektóre niedorzeczności na temat języka litewskiego zaobserwowane ... (ABAS2005-1; SC2)
 [In this article, I do not intend to look into all the reasons for the existing state of affairs. Still, I will point out some misconceptions about the Lithuanian language observed among ...]
- (6) Celem pracy jest charakterystyka semantyczna i formalna antroponimów używanych przez nadawców internetowych anonsów towarzysko-matrymonialnych. Analiza antroponimów ma również doprowadzić do wysnucia wniosków na temat tendencji ... (ON2004-8; SC2)

[The aim of this paper is semantic and formal analysis of anthroponyms used by senders of online social-matrimonial advertisements. The analysis of anthroponyms is also intended to yield conclusions about the tendencies ...]

(7) Celem opisu jest przyporządkowanie poszczególnych jednostek leksykalnych klasom walencyjnym, składającym się ze schematów eksplikacyjnych ... (SFPS2018-4; SC3) [The aim of this description is to assign particular lexical units to valency categories which comprise explicative schemata of ...]

Another trend noticed with regard to Move 3 Step 1 is the growing popularity of cyclical realisations. While isolated cases were attested in SC1 and only a few more in SC2, almost in a quarter of texts that comprise the most recent sub-corpus, the statement of purpose is developed throughout the introduction, with the authors specifying their goals or intentions in its various parts, as shown in (8) and (9). In (8), the author starts with a tentative and general formulation of the goals ('I will attempt to seek an answer'), which are further specified in the end of the introduction. In (9), the author begins stating his goals in the middle of the introduction, where he refers explicitly to an existing research gap, and returns to his objectives towards the end of the section. This change may be related to the length of introductions in SC3: naturally, a longer introductory section offers more opportunities for multiple or cyclical realisations of this rhetorical move. However, combined with observations concerning the emerging preference for strong, direct statements of purpose, the rise in cyclical realisations may be seen as a result of an exposure to English rhetorical patterns. Authors of English-language linguistics articles have been found to often outline their goals at several points in the introduction, which suggests that they treat the statement of purpose as a structural axis of the section, an idea they come back to and elaborate on as the introduction unfolds (Warchał 2018). This approach to outlining research goals seems to be gaining currency in Polish texts.

- (8) Odpowiedzi na zawarte w tytule pytanie ... postaram się poszukać, analizując formy stopnia wyższego przymiotników wyekscerpowane z publikowanych źródeł leksykograficznych ... Przedmiotem zainteresowania stanie się również ich obecność we współczesnej polszczyźnie, ze szczególnym uwzględnieniem ich funkcji w utworach literackich oraz w potocznym wariancie języka na podstawie danych zamieszczonych w Narodowym Korpusie Języka Polskiego (NKJP). (PORJ2017-3; SC3)
 - [I will attempt to seek an answer to the question posed in the title ... by analysing comparative forms of adjectives excerpted from published lexicographic sources ... An object of interest will also be their presence in contemporary Polish, with particular emphasis on their function in literary texts and in the everyday variety of the language, based on data from the National Corpus of Polish (NKJP).]
- (9) Artykuł ten powstał z chęci wypełnienia luki w badaniach nad językiem (dyskursem) politycznym ... W artykule opisuję więc, w jaki sposób obrazowano rzeczywistość totalitarną w okresie okupacji na terenie tzw. Generalnego Gubernatorstwa, czyli w części przedwojennego państwa polskiego ... (JK2017-10; SC3)
 - [This article is intended to fill the gap in research on political language (discourse) ... In the article, I present the ways of depicting the totalitarian reality in the times of occupation on the territory of the General Government, that is, part of pre-war Poland ...]

In contrast to the elements discussed above, Move 3 Step 2 – announcing preliminary findings – has remained peripheral to Polish introductions. Although more instances were attested in

texts published in the years 2001-2006 compared to the first part of the corpus (8 % in SC1 and 16 % in SC2), the trend reversed in 2017-2018. Similarly, the structure of the article (Move 3 Step 3) is consistently rarely outlined in Polish, as indicated by 12 % in SC1, 4 % in SC2, and 6 % in SC3. It is noteworthy that these two elements are treated as optional in the rhetorical structure of English introductions (Swales/Feak 1994), and that they have been found to be much less common in English-language linguistics articles than establishing a niche or announcing research goals (Warchał 2018). This probably affects the perceived centrality of the two steps by Polish academic writers.

The results above show some consistent trends in the rhetorical organisation of Polish-language article introductions across the set period (1987–2018), including such elements as delimitation of the introductory section, identification of a niche and research goals, direct statement of the research purpose, and cyclical realisation of the purpose statement, all of which are becoming progressively more common (the frequencies for these variables across the three time frames are given in Table 2). In the second part of the study, statistical analysis was carried out to determine whether the observed differences in frequencies were statistically significant. To verify this hypothesis, chi-square test for independence was applied, with results presented in Table 3.

Table 3: Results of chi-square test for independence; significance level $\alpha=0.05$

		Value of chi-	
No	Variable	square statistic	p-value
1.	Delimitation of introduction	20.73	0.00003
2.	Establishing a niche	3.09	0.21380
3.	Outlining purposes / Announcing the research	4.56	0.10228
4.	Direct statement of purpose	7.77	0.02058
5.	Cyclical form of the statement of purpose	9.52	0.00856

As can be seen in Table 3, the p-value is smaller than the significance level for three variables: section delimitation, direct statement of purpose, and cyclical realisation of the statement of purpose, so the differences observed in the frequencies of these elements in the three sub-corpora are statistically significant.

When the chi-square test of a table larger than 2×2 is significant, it is recommended that the data should be investigated further with post-hoc pairwise comparisons using Bonferroni corrections of the p values (MacDonald/Gardner 2000). In our case, only individual tests with p < 0.0166 were considered significant (the Bonferroni correction of the p value equals 0.05/3 = 0.01666). The results of the Bonferroni post hoc test are presented in Table 4.

Table 4: Results of Bonferroni post-hoc test; significance level p < 0.0166

Variable	Sub-corpora (time frames) compared		Value of chi- square statistic	p-value
Delimitation of introduction	SC1:	SC3	14.73	0.00012
	SC2:	SC3	14.73	0.00012
Direct statement of purpose	SC1:	SC2	4.46	0.03477
	SC1:	SC3	7.25	0.00709
	SC2:	SC3	0.36	0.54778
Cyclical form of the statement	SC1:	SC2	1.38	0.23968
of purpose	SC1:	SC3	8.31	0.00395
	SC2:	SC3	3.47	0.06239

The obtained results of pairwise comparisons confirmed the statistical significance of the following observations: delimitation of introduction occurs more frequently in SC3 than in the other two sub-corpora; direct statement of purpose occurs more frequently in SC3 than in SC1; and cyclical realisation of the statement of purpose occurs more frequently in SC3 than in SC1. On the whole, the results of the statistical analysis confirm that, in the case of three of the five variables considered, one can speak of a rhetorical change in the organisation of Polish-language linguistics article introductions. The differences are statistically significant over a longer period of time (SC1: SC3), but the results also indicate that the dynamics of the process was different across various time-frames. Preferences concerning direct statement of purpose were changing faster in the last decade of the 20th century, while those regarding division into sections and cyclical realisation of the statement of purpose, in the first decades of the present century.

6 Concluding remarks

In this study, the CARS model was applied to investigate changes in the rhetorical organisation of Polish-language linguistics article introductions. It was argued that the global status of English, manifest both in the amount of research available in this language and in the research evaluation criteria applied at all levels, is likely to influence discourse practices in the national language. We were specifically interested in whether the structure of Polish academic texts is now more similar to that of English-language articles than it was 30 years ago and, if this were the case, what aspects have been most affected by the process. The results show that the rhetorical structure of Polish article introductions is changing to the effect that academic Polish is acquiring features so far considered characteristic of academic English. Thus, the answer to the first research question is positive. The aspects that turned out to be most affected by the change include division into sections, direct statement of purpose, and cyclical realisation of the statement of goals, all of which are becoming more common, as confirmed by statistically significant differences in figures for individual time-frames. No changes have been observed with regard to announcing principal findings and indicating article structure, which remain peripheral to Polish texts. The reason for this might be that these two rhetorical steps are considered optional in English introductions and often omitted, which means that Polish authors may be less familiar with them and likely to perceive them as non-essential. As for establishing

a research niche, a central move in English introductions, there are some indications that the observed changes may affect it as well, but in this case, the results remain inconclusive. The fact that Polish authors show more resistance towards this element may be related to the fact that this rhetorical move is often combined with some amount of academic criticism: authors challenge previous results, point out omissions, or otherwise indicate that previous analyses are incomplete. Criticism, in turn, may be rhetorically difficult for Polish writers, who have been found to be especially circumlocutory and tentative when it comes to challenging others' views (Duszak 1994). On the other hand, carving a research niche has become critically important in research proposals submitted to national (as well as international) grant-awarding bodies, which may suggest that the upward trend, however slow, will continue.

On the whole, the most powerful factors behind the change in the structure of Polish introductions seem to be the exposure of Polish scholars to English texts and the research policy that prioritises publishing in international journals. A recent study has shown that almost 80 % of social sciences and humanities scholars affiliated with a large Polish university use English texts in their research work and that for over 40 %, English is the main language of cited research (Warchał/Zakrajewski 2021). This regular exposure to English publications cannot be without effect on readers' expectations: scholars are becoming accustomed to patterns fostering selective reading, such as text divisions with headings and introduction of research goals in text segments that are easy to locate. The structural predictability and orientation towards a specific problem, considered one of the hallmarks of the Anglo-Saxon style, will appeal to academics who strive to keep pace with ever-growing amounts of research and hence value efficient text organisation. These expectations and emerging preferences are likely to be transferred to Polish and surface in Polish-language academic writing, especially in the case of multilingual authors who use English for publication.

Perhaps unexpectedly, the observed change in writing practices does not seem explicitly promoted or fostered by Polish journals. None of the journals used in this study refers to the organisation of submitted manuscripts in author guidelines or specifies the content of individual text segments. While some journals mention section headings, they do so only with reference to the required formatting (in much the same way as they explain the format of tables or figures), without actually imposing any specific division. The only clear content-related guideline appears in the instruction for authors submitting to *Poradnik Językowy* (n.d.) and concerns the abstract, which is expected to hold justification for the research, presentation of the results, and explanation of the methodology. Still, journal submission policies might have played a role in shaping the organisation of manuscripts by setting longer word limits for submissions, which after 2012 had to meet the minimum length requirements to qualify for inclusion in the evaluation report.

In sum, the results indicate that the omnipresence of English in the academic world, especially in academic research and publishing — combined with national science policy that strongly prioritises internationally shared research — leads to changes in the academic varieties of national languages. While in the case of Polish, it seems unlikely at the moment that the hegemony of English will result in the marginalisation of research in the national language, at least in the humanities, changes in scholarly Polish and the rhetorical structure of academic genres are a matter of fact. Levelling of cultural differences in academic discourse is then another effect of the globalisation of science.

While a shared language in academia is an indisputable advantage, and language change is a natural phenomenon, the study may carry some implications for science policy, especially

with regard to the language of research. In particular, it highlights the importance of developing a multilingual publication policy and, in contexts where English replaces rather than supplements the national language, it underlines the need for bilingual rather than English-only practices.

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