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50 YEARS OF GEOGRAPHIA POLONICA IN THE LIGHT OF CITATIONS

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Abstract

This paper presents an analysis of citations to *Geographia Polonica*, a leading English-language geographical journal edited by Polish geographers, boasting its 50-year-long history. The examination was based on Google Scholar and its Publish or Perish application, that is the most comprehensive search engine of citations which returns the most representative results for Polish sources, particularly in social sciences. Due to the nature of Google Scholar – it only explores existing materials shared in the Internet – the study shows a series of regularities in contemporary citations.

Key words

bibliometrics • citations • journals • Google Scholar • geographical publications • development of geography in Poland • Geographia Polonica

Introduction

The year 2014 marks 50 years since publishing the first issue of *Geographia Polonica*. From the perspective of contemporary science, half a century appears to be a very long period of time, which sees changes in conceptual and methodological bases, adopted paradigms, fundamental scientific

knowledge and science organisation systems. It is a common belief that it is a written word that serves as the basic carrier of scientific ideas and concepts, with research results distributed mainly by renowned magazines – mostly of an international range – including periodicals.

At the same time, geography is a specific discipline of science. The most laconic definition

of a geographical research methodology that would reflect this unique scientific nature compared with other disciplines could be the following: geography sees a collision of a universal approach and a case study. The rationale behind this concise interpretation lays in the fact that although geographers search for general, universal truths, a diversity of individual situations, phenomena and processes on the Earth is so immense and interactions between various elements are so complex that more often than not it is very difficult to establish fundamental regularities, especially when applying induction methods. This creates a cross-cutting and overlapping character of multidimensional ideas and concepts, which is particularly true for social and economic geography and for social sciences as such. Consequently, geography offers a great deal of various concepts and approaches and thus needs to face frequent accusations of its eclecticism.

Throughout 50 years of being published, *Geographia Polonica* was somewhat suspended between locality and ambitions to depict more universal facts. Throughout the period, subsequent editors attempted first and foremost to 'catch' the best and the most interesting aspects of Polish-language geography and extend readership abroad. As a typically Polish journal of an international range, *Geographia Polonica* dedicated most of its papers to such geographical phenomena and processes that were observed and researched in Poland but that could potentially contribute to universal knowledge. Another group of articles was devoted to Polish studies carried out abroad, especially in regions where Polish researchers enjoyed a strong scientific position (Arctic research, India). The fewest papers were those drafted by foreign authors.

After these 50 years, innovative IT tools make it now possible to indicate papers that have resonated the most. Useful in this regard is an analysis of citations which creates the basis for contemporary bibliometrics and scientometrics. Its particular development could be observed in the last decade mainly owing to the digitalisation of scien-

tific publications and their availability on the Web. In principle, there are four key methods of conducting a citation research, which are based on the assumption that a scientific paper has been drafted by (1) an author representing (2) an affiliate institution by means of (3) an information medium (e.g. book, magazine, audiobook, website) and published by (4) a publishing house. In the case of Polish geography, understood as part of a broader category of Earth sciences, the first analyses concerned the most frequently cited papers of individual authors (Racki 1998, 2001). Then, the subject was extended to include scientific journals (Racki 2003; Bajerski 2008a; Śleszyński 2009, 2013b), academic centres (Bajerski 2008b; Śleszyński 2013a) and relations between geography and other disciplines (Stachowiak & Bajerski 2012). What the studies revealed in general was a higher influence (in terms of citations) of physical geography compared with social and economic geography as well as a concentration of citations in a few titles (e.g. *Geographia Polonica*, *Przegląd Geograficzny* and currently non-existent *Biuletyn Peryglacjalny*). In addition, the research empirically proved a 'golden twenty-year period' of Polish geography of the 1960s and the 1970s, when the international audience was offered a great number of articles, which have been exerting a significant impact until the present day.

In this context, it is worth mentioning a list drew up by Harris (1980), in which – depending on adopted criteria – *Geographia Polonica* was ranked 1st to 4th in the 1970s in terms of citations among all the geographical journals across the world and was only followed by such periodicals as *Annals of the Association of American Geographers*, *Economic Geography* or *Transactions of the Institute of British Geographers*.

Goals, sources of data and research methods

This paper aims to present contemporary citations to *Geographia Polonica* and on this basis it endeavours to assess influence

exerted by the journal and indicate regularities in this scope. Under certain conditions and within accepted limitations, citations may measure impact that a scientific record (ideas, concepts, results, etc.) has on the findings of other researchers and thus on the evolution of studies. This is because the essence of quoting is mainly to provide reference to facts and scientific discoveries that date back earlier than a paper in which a citation was published and thus take precedence over and are crucial for a research in progress. There are a few reasons supporting the significance of cited publications and their resonance understood as the flow of information and the development of science. In his paper, being a classic example of a bibliometric research, Garfield (1965) enumerates as many as fifteen reasons for citing. These are (1) paying homage to pioneers by citing classic papers; (2) paying homage to peers by giving credit for related work; (3) applying methods, terms, ideas specified in the works of others; (4) providing background reading; (5) correcting one's own previous work; (6) correcting the work of others; (7) criticising previous work; (8) substantiating or justifying previous claims; (9) alerting to forthcoming work; (10) providing leads to poorly disseminated, rarely cited and poorly indexed work; (11) authenticating data (e.g. figures) and facts; (12) identifying original publications in which an issue was discussed; (13) identifying publications that created later used eponyms or terms; (14) disclaiming ideas of others; (15) disputing priority claims of others.

The analysis of citations was performed by means of Google Scholar, a search engine that indexes key foreign publications and appears to be more useful in ranking Polish sources compared with other bibliographic databases, including in particular Web of Knowledge/Web of Sciences. This higher level of appropriateness is due to the absence of Polish geographical journals on the ISI Master List and rare publications of Polish geography-oriented authors in journals on the List (allowing for a country size). Such approach provides a better picture of positions that

geographical centres occupy in particular countries without losing their international impact. The investigation into citations was held in early 2014.

In its essence, Google Scholar is a search engine of online texts containing a bibliography. Thus, the tool can compute the number of citations on the basis of materials available on websites. This concerns both the regular websites of typically scientific journals and publishing series as well as so-called 'grey literature' in the form of various reports, doctoral dissertations, documents in the .pdf format, etc. It is worth emphasising that Google Scholar does not search for parts of existing citations, e.g. due to mistakes and inconsistent meta-tags. The total number of cites to scientific publications is surely higher, but as large parts of literature are still not digitalised, they are not available online for search engines, like Google Scholar. This translates into poorer representativeness of older sources.

The advantages of Google Scholar in the field of geography include a higher level of representativeness for Poland and relative easiness in obtaining source materials (owing to support software Publish or Perish; compare Harzing 2011). Disadvantages are commonly known: failure to skip auto-citations and a certain percentage of computing errors due to an imprecise indication of authors and publishers and thus indexing titles of the same papers as separate items. The above generates difficulties in more advanced calculations (such as Hirsch index), although in general Google Scholar remains a useful basis for building total citation statistics. In Poland, the merits of Google Scholar benchmarked with other citation data sources have recently been presented by Racki and Drabek (2013), who claimed that despite various drawbacks, the search engine returned the most representative results for social sciences and humanities.

The researchers analysed citations on the basis of the years of publication, attempting to demonstrate historical and author-related regularities. They also developed a list of the most frequently cited articles, providing -

in the last part of the analysis – citations to *Geographia Polonica* in comparison with other journals dedicated mainly to national geographies written in both national languages and English.

Citations to *Geographia Polonica*

According to editorial data, in 1964-2013, *Geographia Polonica* published 1399 articles of the total volume of 18,773 pages. All of them are fully available online via the Polish Digital Repository of Scientific Institutes (RCIN 2014). Access is free of charge and does not require logging in. At the same time, in early 2014, Google Scholar/Publish or Perish correctly indexed 919 items. The figure returned by Google Scholar is higher than the editors' one due to the above-mentioned errors in bibliographic descriptions, meta-tags, etc. However, this fact does not considerably affect the citation analysis described herein, because it involved articles cited at least once, receiving a pool of 648 articles. The papers were cited 3180 times in total.

A breakdown of citation figures reveals that only few publications were regularly cited (Fig. 1). The top-rated article was cit-

ed 125 times. If all the papers were sorted in a descending order, a function to reflect it would strongly resemble Hoerl's model ($R^2 = 0.979$). This indicates a very high concentration referring to the well-known Pareto principle (80/20)¹.

The analysis of citations by years has given a very interesting outcome (Tab. 1, Fig. 2). The most remarkable finding is that the majority of citations refer to the first period of publishing *Geographia Polonica* (1964-1970), followed by those from 1971-1980. This marks a significant difference from other citation results returned by Google Scholar, which prefers newer papers available in various online databases and digital repositories. The impact of older articles is thus very strong – stronger than the impact of newer works published in the last two or three decades.

Similar conclusions can be drawn from the analysis of the number of citations per article, which indicates the highest figures for papers from the years 1971-1980 (4.7 citations per 1 indexed article) and 1964-1970 (4.5 citations per 1 indexed article). In addition, these periods note a high Hirsch index computed for citations to articles in particular decades and a lower percentage of uncited papers.

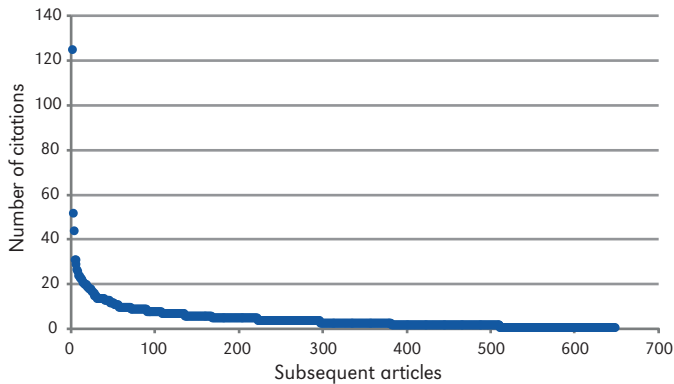


Figure 1. Number of citations to articles published in *Geographia Polonica* in 1964-2013 in the descending order. The chart indicates articles with at least one citation only (3 January 2014)

ed 125 times and only 17 works were cited at least 20 times. If applied to the quantitative analysis of *Geographia Polonica*, Hirsch index would return value 19, meaning that

¹ A rule formulated by Italian economist Vilfredo Pareto (1848-1923) stating a rule of thumb in many social and economic phenomena, according to which 20% of the elements of one type are related to 80% of the resources of another type.

Table 1. Citations to articles published in *Geographia Polonica* in the period 1964-2013 returned by Google Scholar (3 January 2014)

Index	Total	In years					
		1964-1970	1971-1980	1981-1990	1991-2000	2001-2010	2011-2013
Number of correctly indexed articles	919	183	173	158	208	146	51
Number of citations in total	3,166	832	820	461	518	498	37
Number of citations per year	63	119	82	46	52	50	12
Number of citations per indexed article	3.4	4.5	4.7	2.9	2.5	3.4	0.7
Hirsch index for publications in a given period	19	13	12	9	9	12	3
Percentage of uncited papers	29.9	17.5	20.8	38.0	34.1	30.8	60.8
Increment after a search in 2009 (Śleszyński 2009) (2009=1)	3.0	4.0	2.2	2.7	2.5	5.1*	-

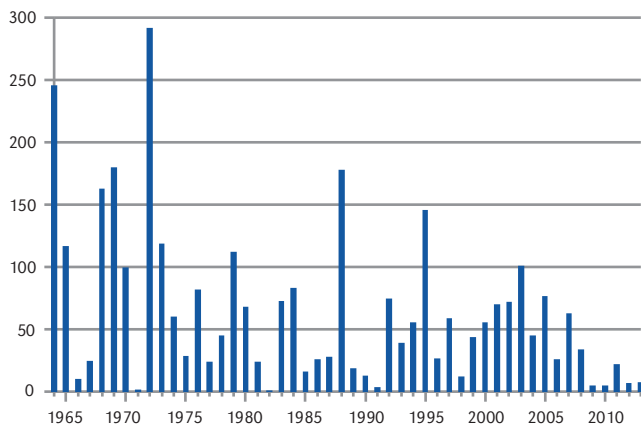
*in the period 2001-2008.

What is particularly interesting, the comparison of a search performed for the needs of this analysis and a search made in 2009 (Śleszyński 2009) reveals that the highest increments concern either the latest papers (2001-2008) or those published in the 1960s. The lowest increments have been noted for papers from the 1970s and the 1990s.

After eliminating papers published in the last 3 years (2011-2013), which for obvious reasons are cited relatively seldom, the lowest citation figures have been returned for 1981-1990 and 1991-2000. As regards the first period, it can be assumed that the low number is due to the social and political state

of affairs caused by the proclamation of martial law (1981-1983) and its consequential deep crisis, also in science. If it had not been for relatively often cited papers from 1988, the decade 1981-1990 would have been very poor in terms of citations.

The year 1989, which saw the fall of the Iron Curtain in Eastern Europe, did not bring any significant improvement in this regard. Contrary to common opinion, the reasons why the resonance of *Geographia Polonica* was fairly low in the last two decades of the 20th century were not only in the dramatic worsening or continuation of the poor financial standing of science – the Polish science

**Figure 2.** Number of citations to articles published in *Geographia Polonica* by years of publication returned by Google Scholar (3 January 2014)

was highly underinvested already in the 1980s.

A drop in the influence of *Geographia Polonica* was also due to organisational reasons in Polish geography, which after 1989 widely dispersed its editorial efforts. Contemporary geographical centres in Poland have the ambition to release their own publications – not only in the Polish language (which is natural and understandable for prestigious reasons) but also in English. In 2014, Polish geographers published approx. The ten foreign-language titles (mainly in English and bilingual – published concurrently in Polish and English), but these are mainly less popular magazines. According to a list of citations returned by Google Scholar 5 years ago (Śleszyński 2009), an English-language title to follow *Geographia Polonica* – that is *Studia Geomorphologica Carpatho-Balcanica* – noted 47% of citations, while the next one in row – *Quaestiones Geographicae* – recorded 19%. However, it should be emphasised that these titles have not been published for as long as *Geographia Polonica*².

Most frequently cited authors and articles

Table 2 presents a list of the most frequently cited authors who published their works in *Geographia Polonica*. Top ranks have been taken by ‘fundamental’ names of the fathers of the success of Polish geography in the 1960s and the 1970s, that is Leszek Starkel and late Jerzy Kostrowicki and Kazimierz Dziewoński associated with the Institute of Geography and Spatial Organization of the Polish Academy of Sciences (until 1974 Institute of Geography of the Polish Academy of Sciences). They have been followed by foreign authors who, although did

not build foundations for the development of geography or relative sciences in their respective countries to such an extent as the above-mentioned Polish researchers, were much often cited owing to more advanced institutional, personnel and publishing development in countries like the United States, Great Britain, Sweden, etc.

A characteristic feature is that *Geographia Polonica* did not serve as the key distribution channel for the most acknowledged scientists and their best articles. In the case of the first five names, papers published in *Geographia Polonica* account for 5-10% of their whole citation record. The most frequently cited work published therein by L. Starkel was ranked third among all his best cited papers, the one by J. Kostrowicki was the fourth, while a paper written by K. Dziewoński was only the seventeenth. *Geographia Polonica* was the leading periodical for seldom quoted authors, who published there their more or the most important works.

Table 3 contains a list of the most frequently cited individual papers. It has summarised 18 works quoted at least 20 times. The top position has been taken by L. Starkel and his article from 1972 about the role of catastrophic rainfall in the shaping of the relief of the lower Himalaya. The second rank is occupied by the work of Swedish authors (S. Björck, B.E. Berglund, G. Digerfeldt) written in 1988 that discusses deglaciation in Sweden, while the third one by J. Kostrowicki’s article on the typology of agriculture in Poland. 12 papers on the list touch upon physical geography, mainly geomorphology, and only 6 works relate to social and economic geography. The catalogue lists J. Kostrowicki three times (3rd, 9-10th and 14-15th places), L. Starkel twice (1st and 7th places) and R. Galon also twice (8th and 16-18th places).

Geographia Polonica vs. other national geographical periodicals

Finally, it is worth benchmarking the number of citations to *Geographia Polonica* against those relating to other national periodicals

² As stated in the paper, fairly good results in terms of citations were also recorded by journals that published materials in various languages (mainly in Polish, English and French), including in particular *Biuletyn Peryglacjalny* published in 1954-1999, whose number of citations has been higher compared to *Geographia Polonica*.

Table 2. The most frequently cited authors of articles published in *Geographia Polonica* in 1964-2013 returned by Google Scholar compared with the authors' total records of citations (3 January 2014)

Author	Number of indexed papers cited at least once	Number of citations to articles published in <i>Geographia Polonica</i>	Number of citations in total**
L. Starkel	12	225	4,932
J. Kostrowicki	15	154	1,070
K. Dziewoński	14	89	1,292
A. Jahn	6	68	1,806
R. Galon	5	63	960
S. Kozarski	4	57	1,505
P. Korcelli	12	54	850
B.E. Berglund*	} 1	} 52	5,348
G. Digerfeldt*			2,514
S. Björck*			10,948
T. Czyż	8	52	698
K. Klimek	4	44	911
K. Błażejczyk	4	43	1,039
H. Maruszczak	5	40	1,075
J.J. Parysek	3	39	896
S. Leszczycki	9	34	669
B. von Rabenau	1	31	206
W. Chmielewski	1	31	568
Z. Chojnicki	7	31	1,084
A. Kędziora	2	27	886
A. Potrykowska	6	27	195
Z. Czeppe	4	27	322
Z. Rykiel	5	26	595
W. Niewiarowski	4	25	829
T. Niedźwiedz	4	24	1,187
J. Bański	1	22	698
Z. Borówko-Dłużakowa	1	21	232
A. Matzarakis	1	20	4,081
L. Ryszkowski	1	20	2,150
M. Kuchcik	2	20	90

*citations to one co-authored paper published in *Geographia Polonica*.

**all sources according to Publish or Perish.

of international range published especially in countries neighbouring with Poland (Tab. 4). As it appears overall, *Geographia Polonica* records much higher results compared with journals from former communist bloc countries. When juxtaposed with titles published in Western Europe, *Geographia Polonica* sees fewer citations if taking account of journals offering English-language articles, but more citations as regards journals in national languages.

This prevalence seems especially high when contracting citations to *Geographia Polonica* with other periodicals in particular decades. Especially unfavourable for the Polish publishing industry was the last period, after 1990. Fewer citations in the last three years (2011-2013), in comparison with other titles, clearly depict reserves and a need to shorten the publishing cycle and to take marketing actions aimed to accelerate the distribution of research findings. Among

Table 3. The most frequently cited articles published in *Geographia Polonica* in 1964-2013 returned by Google Scholar (3 January 2014)

Rank	Authors	Title	Year	Cites
1	L. Starkel	The role of catastrophic rainfall in the shaping of the relief of the lower Himalaya (Darjeeling Hills)	1972	125
2	S. Björck, B.E. Berglund, G. Digerfeldt	New aspects on the deglaciation chronology of South Sweden	1988	52
3	J. Kostrowicki	Geographical typology of agriculture in Poland. Methods and problems	1964	44
4-5	W. Chmielewski	Ensembles micoquo-prondniens en Europe centrale	1969	31
4-5	B. Rabenau	Urban growth with agglomeration economies and diseconomies	1979	31
6	S. Kozarski	Time and dynamics of the last Scandinavian ice-sheet retreat from northwestern Poland	1988	29
7	L. Starkel	The modelling of monsoon areas of India as related to catastrophic rainfall	1972	27
8	R. Galon	Geomorphological and geological analysis of the proglacial area of Skeidararjokull: central section	1973	26
9-10	J. Kostrowicki	Some methods of determining land-use and agricultural 'orientations' as used in the Polish land utilization and typological studies	1970	24
9-10	K. Klimek	The retreat of alluvial river banks in the Wisloka Valley (South Poland)	1974	24
11-12	A. Jahn	Denudational balance of slopes	1968	23
11-12	J.J. Parysek	Development of Polish towns and cities and factors affecting this process at the turn of the century	2005	23
13	J. Bański	Problem areas in Polish agriculture	2001	22
14-15	J. Kostrowicki	A hierarchy of world types of agriculture	1980	21
14-15	Z. Borówko-Dłużakowa	Palynological investigations of Late Glacial and Holocene deposits at Konin	1969	21
16-18	K. Błażejczyk, A. Matzarakis	Assessment of bioclimatic differentiation of Poland based on the human heat balance	2007	20
16-18	L. Ryszkowski, A. Kędziora	Modification of the effects of global climate change by plant cover structure in an agricultural landscape	1995	20
16-18	R. Galon	Some new problems concerning subglacial channels	1965	20

other aspects, beneficial in this regard would be publishing articles with the 'forthcoming' status as regards their print version. Such solution is employed by the majority of contemporary periodicals, enabling articles to be noticed earlier by potential authors of other works and raising the likelihood of being cited.

Discussion and conclusions

Geographia Polonica still remains the most frequently cited contemporary English-language geographical journal published in Poland, although its influence has clearly

decreased since the 1960s and 1970s. There are plenty of reasons for this state of affairs, which relate to the development of science in Poland and abroad, including geography per se. Unquestionably, relatively numerous citations dating back 50 years signify the international gravity of the Polish geography of those times and thus justify the notion of a 'golden twenty-year period'. Since the 1980s, Polish science, including geography, has been suffering from a financial and organisational crisis. Despite an economic and civilisation leap, funds budgeted for science have been dramatically low (approx. 0.4% of GDP – several times less compared with

the EU average). Plus, in terms of institutional background, Polish science has not been reformed practically since 1989. All this has been coupled with a globally observed increase in the Anglo-Saxon dominance in the majority of sciences, including geography. This phenomenon is much wider and affects not only geography but nearly all the scientific disciplines, including some humanities that focus on local research.

Many data have confirmed that the Anglo-Saxon dominance is quite commonly noticed and criticised (Gutiérrez & López-Nieva 2001; Short et al. 2001; Whitehand 2005; Aalber & Rossi 2006), also by Polish authors (Bański & Ferenc 2013). This judgmental opinion is mainly due to changes in the way science is applied, in particular as regards even more frequent attempts to adopt neoliberal organisational principles which enforce effectiveness (Paasi 2005). The easiest way to measure such high performance is by adopting bibliometric methods, which in principle prefer papers published in English. This in turn poses a serious risk for the development of national geographies (i.e. those practiced in particular countries) which are based on research into their own territories and their parts. Recently, Bajerski (2011) has clearly emphasised a kind of a 'closure' in the citations to geographical periodicals published in the French, German and Spanish languages.

The citation statistics reveal that Polish physical geography, especially geomorphology, is more recognisable, although recent years have also seen an increase in the share of papers dedicated to social and economic issues. The dominant position in this regard is occupied by authors associated with the Institute of Geography and Spatial Organization of the Polish Academy of Sciences (Institute of Geography of the Polish Academy of Sciences), which established *Geographia Polonica* to promote Polish geography. Today, the role of collaboration and synergy effect has been on the decrease due to the organisational and institutional decentralisation of research.

The latest publications created after 2000 rarely appear in worldwide literature. It is not certain whether this is due to the lower quality of research or insufficient solutions in the scope of promoting domestic geographical scientific papers. This is also followed by irregularly released issues, frequent delays and a strong dissemination of editorial efforts. Currently, scientific centres aim to obtain a strong international position independently. However, such individual attempts are ineffective because of the personnel and institutional weakness of Polish geography.

These deficiencies translate into poorer research work and shortcomings in reviews, including occasionally too lenient assessments. Unhealthy competition between journals leads to many negative phenomena, like disregarding papers published in other (competitive) periodicals, 'stealing' authors and their works, too easy acceptance of articles rejected by other periodicals, further fragmentation of papers and their findings by publishing similar data, etc.

A parametric assessment of scientific journals and institutions introduced by the Polish Ministry of Science and Higher Education, the aim of which is to make up for the failures of the Polish scientific publishing industry (Wilkin 2013), often leads to a compulsive pursuit for meeting sometimes unreasonable parameters at the cost of quality and creates a space for abuses. From the get-go, this problem has given rise to numerous controversies in Poland due to fundamental differences between the quality of a scientific record in particular disciplines and unified criteria, especially the count of citations to papers, authors, periodicals, scientific centres, etc. There are highly-valued papers in niche disciplines without having any chance to be cited.

Paradoxically, it appears that despite dramatically different conditions before and after 1989, including the difficult political situation that hindered international contacts from being established, censorship (especially in humanities) and attempts of the authorities to submit social sciences to the Marxist ideology, previous achievements of Polish

Table 4. Citations to *Geographia Polonica* compared with selected European geographical journals returned by Google Scholar. The journals have been ordered alphabetically, starting with those published in Poland and followed by foreign magazines (3 January 2014)

Title	Country	Primary language	Year of establishment	Total citations	Before 1960	1961-1970	1971-1980	1981-1990	1991-2000	2001-2010	2011-2013	Citations per year	Maximum number of citations of a single article	H index
Bulletin of Geography. Socio-economic series	Poland	English	2002	137	0	0	0	0	0	120	17	13	8	5
European Spatial Research and Policy	Poland	English	1994	706	0	5	0	0	225	458	18	38	44	11
Geographia Polonica	Poland	English	1964	3,202	5	850	833	461	518	498	37	66	125	19
Miscellanea Geographica	Poland	English	1984	388	0	0	0	118	101	159	10	14	14	7
Przegląd Geograficzny	Poland	Polish	1919	4,823	1,207	1,086	673	759	476	619	3	52	98	20
Quaestiones Geographicae	Poland	English	1974	885	0	0	289	160	255	154	27	24	75	12
Acta Geographica Slovenica/Geografski Zbornik/Geographica Slovenica	Slovenia	English, Slovenian	1952	538	0	0	17	6	79	360	76	10	16	10
Danish Journal of Geography/Geografisk Tidsskrift	Denmark	English, Danish	1901	3,818	474	54	288	462	863	1,254	423	35	48	23
Die Erde	Germany	German, English	1853	6,370	721	576	489	521	773	1,349	1,941	41	383	22
Erkundende. Archive for Scientific Geography	Germany	German, English	1947	15,260	4,441	2,299	1,539	990	2,887	2,940	164	232	322	46
Fennia	Finland	English, Finnish, German	1889	4,175	518	254	490	1,280	827	764	42	35	383	27
Geografický časopis	Slovakia	Slovak	1949	1,731	63	116	222	273	539	501	17	28	42	13

Title	Country	Primary language	Year of establishment	Total citations	Before 1960	1961-1970	1971-1980	1981-1990	1991-2000	2001-2010	2011-2013	Citations per year	Maximum number of citations of a single article	H index
Geografski Vestnik	Slovenia	Slovenian, English	1925	444	91	77	83	46	71	74	2	6	15	8
Geographica Helvetica	Swiss	German, English	1946	3,540	334	245	258	743	786	1,141	33	54	320	24
Geographica Pannonica	Serbia	English	1997	271	2	0	0	0	20	237	12	18	15	7
Geographische Rundschau	Germany	German	1949	9,617	244	707	734	1,629	3,500	2,751	52	151	91	24
Geographische Zeitschrift	Germany	English, German	1895	8,092	2,790	624	828	966	1,997	877	10	70	239	32
Irish Geography	Ireland	English	1954	4,312	428	894	576	734	784	874	22	74	169	24
L' Espace géographique	France	English, French	1972	2,289	0	0	128	70	220	1,795	76	57	58	20
Problemi na geografijata/ Problems of Geography	Bulgaria	English, Bulgarian		154	16	12	27	27	39	33	0	1	6	5
Vestnik Moskovskogo Universiteta, Seriya 5: Geografija	Russian Federation	Russian, English	1960	889	15	175	225	92	19	363	0	18	17	8

geography have entered for good into the core of worldwide literature. Later and contemporary accomplishments seem insignificant, if not poor. The best works are published in international journals, but – apart from physical geography – they are cited rarely. Exceptions are papers drafted in international teams. Unquestionably, this is a subject for a separate and necessary discussion. The aim of this article is only to signal that it is frequent opinion, supported by hard statistics, that Polish science in its majority has been experiencing a deep financial and organisational crisis and has not consumed the fruits of the economic boost of the last two decades. There are also certain shortcomings when it comes to a change in institutional and organisational conditions as well as in the model of performing scientific work. The ethos of such work has deteriorated, which seems to be in fact a global trend. Contemporary science has been strengthening its relations with business, and even pure economism, and has less in common with discovering the truth.

When juxtaposed with western national periodicals, Polish top geographical journals, like *Geographia Polonica* and *Przegląd Geograficzny*, record similar results when it comes to the total number of citations, the number of citations brought down into the years of journal's presence on the market and Hirsch index. However, when benchmarked with the titles from CEE countries, formerly creating

part of the communist bloc, the Polish magazines note much better figures. Unfortunately, it seems that geographical periodicals start losing the fight with related titles, which often publish geographers' papers due to their much greater scope of resonance. Introduced in Poland over 10 years ago, changes in assessing scientific institutions more and more often have rewarded papers published in foreign journals, which potentially weakens the opportunity to acquire better materials for the needs of domestic titles. The frequent presence of Polish geographers in international, prestigious magazines, especially those indexed on the ISI Master List, contributes to the desired internationalisation of this scientific discipline, but weakens the ability to conduct an individual publishing policy.

Breaking the deadlock requires courage to overcome prejudice and go beyond particular or local interests. What Polish geographers should start with is effective promotion of a single English-language periodical serving as a business card and a place to find (review) the most important and interesting research results, as it was in the early days of *Geographia Polonica*.

Editors' note:

Unless otherwise stated, the sources of tables and figures are the author(s), on the basis of their own research.

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