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A diagnosis of contemporary geography in Poland – selected issues¹

Abstract: This article presents the contemporary state of development of Polish geography as exemplified by selected aspects, i.e. the place of the discipline within the Polish academic system, the main directions for research, and the development of academic staff and geography institutions. The text is first and foremost of the review and informational kind, being primarily targeted at the foreign reader. In connection with this, detailed analyses have been avoided, while some of the opinions expressed are offered for the purposes of discussion and are solely the personal reflections of the author.

Polish geography discharges tasks of a cognitive, educational, popularising and applied nature. At present there are 15 research institutions in Poland operating within its different fields, or else in tourism and spatial management, with 14 of these being active in higher education with enrolled students. The institutions in question together employ 125 Professors, 138 habilitated doctors and 536 staff with doctorates. The research carried out by these workers embraces all the specialist fields identifiable within geography, though the dominant role is clearly played by what may be broadly termed “physical geography” (including in particular geomorphology, climatology, hydrology and environmental protection).

The assessment of the current achievements of Polish geography is not an unambiguous one. Indeed, the process of subject fragmentation needs to be looked upon critically, since it markedly hinders the undertaking of any wider inter-disciplinary studies. Geographers have shut themselves in their own “subject-specific circles”, only rarely poking their heads out beyond their boundaries. However, more recent years have brought an improvement in this situation, which may reflect growth in the significance of practical studies within Polish geography, as well as influx of young research staff who tend to perceive space in holistic terms, as well as in relation to a specific problem, rather than on an object-by-object basis.

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Geography in Poland retains its character as one of the classical sciences, though it is also taking on the features of a practical discipline. Attesting to this is a growing number of research tasks and projects implemented to meet the needs of practice. An advantage enjoyed by geography in this type of research is its combining of theory and methodology of the natural and social sciences, as well as its perception of local and regional specifics. It is thanks to this that the research carried out by geographers is competitive.

Key words: geography studies, physical geography, socio-economic geography

Introduction

Polish geography has age-old traditions, its beginnings stretching back to the shaping of the country's statehood. The first geographical texts penned by Polish chroniclers (Gall Anonim and Wincenty Kadłubek) appeared in the 12th and 13th centuries (Jackowski, Liszewski and Richling 2008), while the first regular lectures on matters geographical began to be given at the Kraków Academy at the end of the 15th century. In subsequent centuries, geography in the Polish lands developed in line with European trends and standards, though the process was not without its obstacles, not least the 150-year loss of Polish independence (123 years off the map of Europe altogether), the heinous murder of a great many professors during World War II and the limitation of international contacts enforced during the communist period. In spite of all this, Polish geography attained a high level of development and is currently among the leading geographies anywhere in Central and Eastern Europe. Polish geographers represent a broad spectrum of interests, carrying out research that taps into all the main themes present in the geographical sciences.

This article presents the current state of development of Polish geography, discussing the most important issues where structure, directions for research, institutions and personnel are concerned. The text seeks to review and offer basic information and is thus targeted above all at the foreign reader. More detailed analysis has been eschewed here in favour of a broader treatment of the subject matter. In this regard, certain opinions are included with a view to encouraging debate, and to this extent are solely the personal reflections of the author.

The place of geography in the Polish research system – problems and challenges

The classic division of the sciences is into the formal and real sciences, wherein the former (notably mathematics and logic) do not seek to supply answers regarding the reality around us. In turn, the real or true sciences, of which geography is a representative, are subject to a natural/humanist division (Heller 2008). Thus, under this division, geography is indeed taken to represent the true sciences.

The particular, non-typical position the discipline occupies within the empirical sciences reflects the way in which physical geography is an element of the natural sciences (studying the products of nature and employing a precise system of measurement), while socio-economic geography is included among the social sciences (studying what human beings generate and often substituting measurement with a system of valuation and qualitative assessment). Physical geography is faithful to a single paradigm, while socio-economic geography has a large number of such. Moreover, socio-economic geography only rarely uses formal models, while the relative ambiguity characterising approaches to both research and interpretation ensures that results are of a much more subjective nature than would be the case in physical geography.

The issue of geography's dual nature and the theoretical and methodological issues arising out of that status have been under discussion in Poland for at least 25 years now (Chojnicki 1984, 1985, 2004, Chojnicki, Starkel & Wróbel 1986, Falkowski 2000, Maik 2004, Matuszczak 2000). Overall, the prevalent postulate is that divergence should not be allowed to proceed further, or should even be reversed to the point where a single discipline is re-established, through the identification and pursuit of research topics that favour re-unification (Chojnicki 1986, Liszewski 1999, Richling 2000). In the opinion of Wilczyński (2003), disappointment with positivism and the excessive specialisation and consequent disintegration of geography have provoked an integrative reaction within humanist geography. However, to date the aforementioned practical programme for the re-unification of the two geographies has not been devised. They have become separate research disciplines that at best form a coalition from time to time for the purposes of joint research work and resolution of problems.

The links between the two geographies are weaker than those between each respectively and other disciplines representing the natural and social sciences. For example, climatology has far more in common with physics, and hydrology with chemistry, than either does with social geography. In turn, of much greater importance for the economic geographer are the links with representatives of the economic or social sciences than those with physical geographers.

The postulated holistic way of perceiving the humankind/environment system that geography has to offer is a reaction to the split gathering pace between the two main currents in our scientific discipline. In fact, there are a number of positive examples of an integrating discipline. Today's socio-economic geography is very willing to enter into an alliance with social disciplines, but those studying how socio-economic phenomena and processes vary across space and through time often reach for the knowledge they possess in physical geography. The reverse also applies, with physical geography creating a community with the physical sciences in drawing upon the achievements of economic geography (Bański 2010).

It is also worth emphasising that physical geography in Poland is a more mature science than economic geography, having at its disposal a fuller apparatus in terms of both methodology and instrumentation. There is a far greater number of active researchers, while the subject matter underpins work done at the majority of geographical institutions. This is confirmed if we compare the number of research

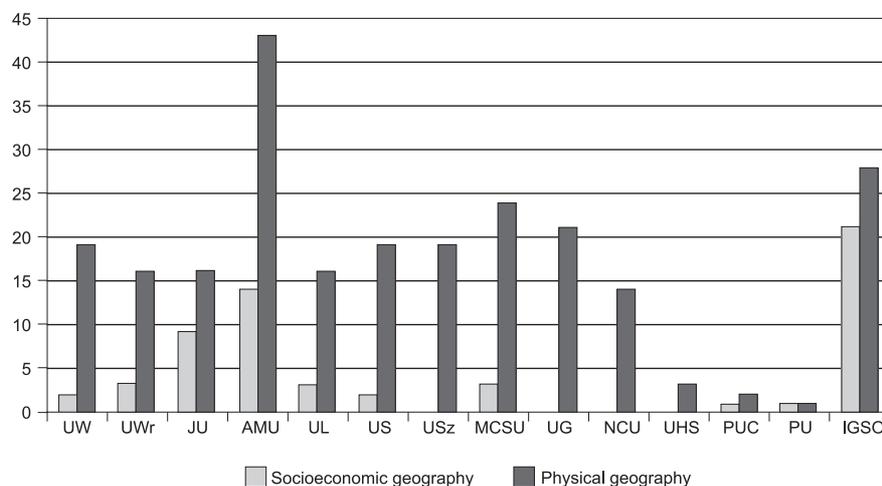


Fig. 1. Number of grant-assisted research projects by the State Committee for Scientific Research put into effect in the geographical branches for the period 1994–2007, for the discipline of geography. Source: The Information Processing Centre

projects put into effect in the years 1994–2007 with financial support from the State Committee for Scientific Research. Only at the Institute of Geography and Spatial Organization PAS are the numbers of research projects being pursued in the two domains relatively even. In the remaining geographical institutions, the prevalence of projects from physical geography has gone unquestioned (Fig. 1). However, in recent years it has been possible to observe a growing activity on the part of economic geographers, this being above all manifested in dynamic growth in the number of applied projects being put into effect.

Practical evidence of the duality characterising Polish geography may be provided by the system awarding scientific degrees and titles. While it is true that doctorates and professorial titles concern earth sciences within the framework of geography, applications to have them awarded are considered by two different commissions. Within the Central Commission for Degrees and Titles (*Centralna Komisja do Spraw Stopni and Tytułów*) there are seven sub-commissions (sections), among which the sub-commission on the Economic Sciences confers degrees and titles where socio-economic geography is concerned, while the sub-commission on the Mathematical, Physical, Chemical and Earth Sciences performs the same function in respect to physical geography.

Another effect of the lack of a distinct determination of where Geography Studies sits in Poland's scholarly system is visible in the diverse affiliations that respective geographical institutions manifest within structures of academic institutions. Thus, for example, the Stanisław Leszczycki Institute of Geography & Spatial Organization operating within the Polish Academy of Sciences framework falls within the Division of Earth and Mining Sciences², along with – for example – the

² The Polish Academy of Sciences is divided into Divisions, within which there are research institutes in operation.

Institute of Geophysics, the Institute of Geological Sciences and the Institute of Oceanology. However, from 2011 on it has become incorporated into the Division of Technical Sciences, along with, for example, the Institute of Hydro-engineering and the Institute of Bio-cybernetics and Biochemical Engineering and the Institute of Chemical Engineering. Also operating within the PAS Framework is the Committee for the Geographical Sciences, which represents Polish geography in domestic and international institutions, as well as shaping its overall R & D tasks. However, this Committee belongs to another Division of the Polish Academy of Sciences, i.e. the Division of Pure Sciences and Earth Sciences.

A second thrust to the division of Polish geography present today reflects subject specialisation. On the one hand, specialised fields within geography are appearing, e.g. the geography of industry, of agriculture and of soil, as well as climatology; while on the other there is a development of interdisciplinary domains that not only take full advantage of the output of various geographical specialisations, but also those of other disciplines (e.g. comprehensive physical geography, the geography of cities, etc.). The marked subject-related division of Polish geography in fact reflects the imposition of the Soviet system in post-War Poland. Indeed, for some time now it has been possible to observe a gradual departure from that model in favour of problem-related research particularly well visible in younger scientific circles.

Pressure for Polish geography to engage in re-unification above all reflects a perceived common interest in this being done. Geographers are aware of the weakness of their discipline as compared with others (above all in regard to a relatively poor research apparatus and methodological weakness, as well as limited numbers of researchers), and thus fear a loss of identity. The two disciplines are too weak within the Polish scientific melting pot for them to match up to the challenges contemporary science is faced with if they continue to act separately. There is also a weakening of the role of geography in the educational system at primary and secondary level, with a clear decline in the number of hours of geography teaching in schools.

Principal research directions

Polish geography is characterised by a broad spectrum of scientific research. The latter in fact takes in all the most important spheres of the geographical sciences, ranging from geomorphology through to the geography of culture. A theoretical and methodological current is also present, though represented by just a small group of researchers.

A dominant role in Polish Geography Studies is taken by fields falling within what is broadly termed physical geography. Work carried out on various spatial scales is first and foremost concerned with analysis of the structures and dynamics in environmental change, with consideration being given to all the components of the environment. The greatest research achievements have been made by geomorphology, which is represented by the largest group of researchers. That said, there

is a clear specialisation of research centres, in association with their geographical location. For example, research at the Poznań centre focuses on contemporary geomorphological processes and morpho-dynamic functions of relief in the Pomerania and Wielkopolska regions. At the University of Silesia, research is *inter alia* concerned with karst phenomena and processes, with account taken of the evolution of the associated relief. The Kraków branch of the Institute of Geography and Spatial Organization (IGiPZ) of PAS is joined by Wrocław University in focusing first and foremost on geomorphological processes in mountain areas.

Thanks to numerous scientific publications of importance, as well as the pursuit of research beyond the borders of Poland, Polish geomorphology does enjoy international renown. Polar regions are a source of particular research interest for our geomorphologists, whose studies supply valuable information, as well as making comparisons with palaeo-geographical studies of the Pleistocene and Holocene possible.

An important role within Polish geography is played by climatological research, which is being pursued at most academic centres, the focus being above all on the analysis of regional climatic conditions, as well as contemporary climate changes and their consequences. At IGiPZ-PAN, studies are carried out in bio-climatology, including in particular on the influence of climate in cities on health, as well as the climatic conditions holding sway in spa and health resort areas. Regional specialisation also extends to hydrological studies, key centres in the south of the country focusing first and foremost on hydrological phenomena in mountains and upland areas, while those more centrally located turn their attention to the hydrology and ecology of lakes and other bodies of water. The study of extreme hydrological processes is gaining in importance – inevitably so given the greater intensity at which these phenomena have been occurring in Poland in the last few years. This is also to say that many of the studies in question are of an applied nature, their aim being to monitor – and if at all possible to limit – flood phenomena.

The last few decades have brought a dynamic development of research at the point where physical geography meets ecology. Geographers have been pursuing studies in the fields of landscape ecology, environmental protection and the protection of geo-systems nationally and regionally, as well as very often dealing with structures and dynamics present in the natural environment, and anthropo-pressure. In this context, they enter into close cooperation with biologists and ecologists.

While so far represented by far fewer scholars, socio-economic geography would seem to be the more intensively developing field. This probably has two basic causes, i.e. increased interest on the part of practitioners in assessments and expert opinions concerned with social and economic development, as well as forms of spatial management and physical development, not to forget the inflow of new methods and concepts from the still-young social sciences. The dynamic development of large agglomerations and metropolitan areas ensures that the leading field of human geography is the geography of towns and cities. Such studies address the whole spectrum of urban issues, be these social, economic, spatial or cultural. The largest research teams active in this field are at the University of Łódź, the Jagiellonian University in Kraków and the Adam Mickiewicz University in Poznań,

as well as at the Institute of Geography and Spatial Organization (IGiPZ) of PAS. A strong linkage with city-related subject matter is manifested in spatial management, planning or physical development studies, albeit also treated as an independent academic discipline taught at universities of technology, agricultural academies and schools of economics. Planning, spatial organisation and so on are in fact specialised in by a large group of geographers, their role in geographical research being revealed *inter alia* in the large number of institutions that have closely relevant titles (as with the aforesaid Institute of Geography and Spatial Organization PAS, the Institute of Social, Economic and Regional Geography of the University of Warsaw, the Department of Spatial Management at the Institute of Geography & Regional Development of the University of Wrocław, the Institute of Socio-Economic Geography & Spatial Management at the Adam Mickiewicz University in Poznań, and so on).

Currently the most fashionable direction for geographical studies is the geography of tourism. This links up with the dynamic development of tourist services in Poland, as well as growth in the significance of tourism and recreation when it comes to regional and local development. Exponents of this part of geography conduct their research at all the academic centres, albeit with most of the effort being centred on documentation studies or those of an applied nature. Theoretical and methodological studies are thus a rarity, mainly being confined to the Universities of Łódź and Warsaw. The interest in tourism and recreation has now reached such a level that Master's studies and scientific research including these elements are also being pursued at the universities of technology and agricultural academies. Independent higher education institutions specialising solely in tourism-related issues have even been established.

Polish geography shows considerable interest in political subject matter, though it is hard to pinpoint lead institutions. Work here concerns electoral geography, political boundaries and borders, and the geopolitical situation. Similar interest is being shown in population studies, including in particular contemporary processes of depopulation and ageing, as well as migratory mobility. Other directions for socio-economic geography are represented by smaller groups of scientists and are often a reflection of the specialisation of the given institution (e.g. the geography of religion at the Jagiellonian University, geography of rural areas at IGiPZ-PAN, and the geography of agriculture at the Adam Mickiewicz University).

As has been noted already, each academic centre specialises in studies of the region in which it is located, from the points of view of both physical and socio-economic geography. That said, it would be difficult to use this as a premise for arguing that there is a strong movement in favour of regional studies within Polish geography. Indeed, a great many geographers keep their distance from regional geography, perhaps because of the high level of specialisation and difficulties with a comprehensive vision of space. As regional monographs are being compiled, it is usual for teams to be put together *ad hoc*, with each member dealing with his/her own subject, linking up with his/her specialisation. One exception is the Institute of Regional and Global Studies within the Faculty of Geography & Regional Studies of the University of Warsaw, employing scientific teams that represent a

holistic approach to the study of wider geographical regions (e.g. Latin America, Africa, Asia and Oceania).

Polish cartography has a rich tradition associated first and foremost with geographical institutes in which the subject matter of cartographic methods is addressed, and maps and atlases edited. Cartography is also taught at higher education establishments of a technical profile, though it is also linked closely with geodesy. The largest teams of cartographers are gathered together in Departments, or else are associated with centres in Warsaw, Lublin and Wrocław.

The last two decades have brought a dynamic development of GIS technology, this initially being spearheaded by the younger generation of cartographers and physical geographers. GIS has become sufficiently universal for most higher education establishments to have independent teams doing research with the latest geo-informatic methods, and training geography students in this field. However, it would seem that Polish geography is still failing to make full and adequate use of GIS, as regards both new research and the promotion of the established body of geographical knowledge. There are also a series of research institutions not linked directly with geography, but nevertheless making wider use of geoinformatic methods.

Polish geographical institutions

Poland's first geographical institution was the Department of Geography established in 1849 at Kraków's Jagiellonian University. Only a little later a further major geographical centre was called into being at the University in what was then Lwów (now Ukrainian L'viv). Following Poland's regaining of independence in 1918, further centres engaging in geographical research were set up in Warsaw, Poznań and Vilnius (now in Lithuania). A Polish Geographical Society was also founded. Further institutions came into existence in successive post-War decades, the youngest of these being the Institute of Geography at the Kazimierz the Great University in Bydgoszcz (founded in 2001).

At the present time, Poland has 15 higher education establishments with geography centres engaging in research and the training of personnel via Master's and doctoral studies, as well as 1 scientific institute operating within the Polish Academy of Sciences framework (Fig. 2). Two higher education establishments (the Universities of Warsaw and Łódź) have separate Faculties devoted to the geographical sciences, while the other 13 institutions have Earth Sciences Faculties or else geographical institutes that represent just part of larger Faculties in which geographers co-exist alongside representatives of the geological or biological sciences.

The size of geographical centres as measured by the number of research laboratories and the potential of academic staff varies markedly (Table 1). The largest institutions include those at the Adam Mickiewicz University in Poznań and the University of Warsaw. There is somewhat more limited research potential at the centres within the Jagiellonian University in Kraków, the University of Łódź, the University of Silesia in Sosnowiec, Wrocław University, the Maria Curie-Skło-

dowska University in Lublin and the Nicholas Copernicus University in Toruń, as well as the Institute of Geography and Spatial Organization PAS. These are generally centres with a long tradition in geographical research. The remaining higher education institutions (the University of Gdańsk, the Jan Kochanowski University in Kielce, the Pedagogical University in Kraków, the University of Szczecin, the Pomeranian Academy in Słupsk and the Kazimierz the Great University in Bydgoszcz) can be considered smaller geographical centres, which does not mean that they are of lesser importance, however. This reflects the way that each centre has its unique research specifics as regards basic and regional studies. It is worth add-



Fig. 2. The distribution of geography institutions in Poland

AMU – Adam Mickiewicz University, UW – University of Warsaw, JU – Jagiellonian University, US – University of Silesia, UL – University of Łódź, UG – University of Gdańsk, NCU – Nicolas Copernicus University, MCSU – Maria Curie-Skłodowska University, UWr – University of Wrocław, USz – University of Szczecin, PUC – Pedagogical University of Kraków, UHS – Jan Kochanowski University of Humanities and Sciences, Pomerania University, KWU – the Kazimierz the Great University, IGSO – Institute of Geography and Spatial Organization PAS, PGS – Polish Geographical Society, UE – University of Economy.

Table 1. Basic data on centres of geography in Poland in 2008*

Abbrev.	University/ Academy	Faculty	Institutes	No. of Depts. and Labs.	No. of full profes.	No. of PhDs and dr habs.
AMU	Adam Mickiewicz University in Poznan	Faculty of Geographical and Geological Science	Institute of Physical Geography and Environmental Planning	21	35	122
UW	University of Warsaw	Faculty of geography and Regional Studies	Institute of Physical Geography Institute of Socio-economic Geography and Spatial Management Institute of Regional and Global Studies	18	13	90
JU	Jagiellonian University	Faculty of Biology and Earth Sciences	Institute of Geography and Spatial Management	13	11	44
US	University of Silesia	Faculty of Earth Sciences	–	29	5	66
UL	University of Łódź	Faculty of Geographical Sciences	Institute of Urban Geography and Tourism Science Institute of Earth Sciences Institute of Socio-economic Geography	25	9	No data
UG	University of Gdańsk	Faculty of Oceanography and Geography	Institute of Geography	10	4	44
NCU	Nicolas Copernicus University in Toruń	Faculty of Biology and Earth Sciences	Institute of Geography	13	7	42
MCSU	Maria Curie-Skłodowska University in Lublin	Faculty of Biology and Earth Sciences	Institute of Earth Sciences	12	9	63
UWr	University of Wrocław	Faculty of Earth Science and Environmental Management	Institute of Geography and Regional Development	8	3	50
USz	University of Szczecin	Faculty of Geosciences	Institute of Marine Sciences	10	10	32
PUC	Pedagogical University of Kraków	Faculty of Geography and Biology	Institute of Geography	7	3	34
UHS	Jan Kochanowski University of Humanities and Sciences	Faculty of Mathematics and Sciences	Institute of Geography	16	4	23

PU	Pomerania University in Słupsk	Faculty of Mathematics and Natural Sciences	Institute of Geography	8	2	27
KWU	Kazimierz Wielki University in Bydgoszcz	Faculty of Natural Sciences	Institute of Geography	No data	No data	No data
IGSO	Polish Academy of Sciences	–	Institute of Geography and Spatial Organization	6	10	45

*Use was made of the *Ekspertyza o stanie nauk geograficznych w Polsce w okresie 1995–2008* (“Expert Opinion on the State of the Geographical Sciences in Poland in the Period 1995–2008”), Committee of Geographical Sciences PAS (Kostrzewski and Roo-Zielińska), in which no account was taken of the University of Economy in Bydgoszcz.

ing that the non-public higher education establishments only provide for the study of geography at one centre, i.e. the University of Economy in Bydgoszcz (at the Faculty of Tourism and Geography).

Research specialisations are above all a throwback to the traditions of the “schools” taking shape around outstanding individual geographers, or else reflect location. It would be hard in just a few sentences to characterise the various academic centres; hence the need to restrict consideration to just a couple of key facts. Most centres have staff engaging in the geomorphological studies that (as has been noted already) are very much the “calling card” of Polish geography. A particularly strong representation of geomorphologists is to be found at the centres in Poznań, Toruń, Łódź, Katowice and Wrocław, as well as at IGiPZ-PAN, these institutions carrying out research of local, regional and international profiles. Also widely represented are studies from other areas of physical geography, albeit with the respective centres showing distinct regional specialisations.

In the case of socio-economic geography – much less well-represented in terms of numbers of researchers – it is easier to point to differences as regards specialisation. For example, at the University of Łódź, work centres on urban subject matter, as well as tourism and recreation, while at the Adam Mickiewicz University it is geographical theories and methodologies of geography that are pursued, along with research on regional development. The Jagiellonian University in turn deals with globalisation phenomena, as well as issues of investment and production. However, this issue requires separate and more in-depth approaches if it is to be encompassed properly.

The engagement and quality that characterise the work done at various centres varies quite markedly, this being a truth revealed by assessments carried out. One of the forms of evaluation of research units involves the so-called parametric assessment that takes account of the results of scholarly activity (number of reviewed publications and entitlements to confer degrees and titles), as well as the practical impacts of research (implementation, new technologies, patents and other actions in the name of applied science). The main aim of the parametric assessment is to ensure that the institutions being promoted are first and foremost those that are strongest and most competitive. The corollary of that is that the institutions falling outside these groups are expected to cope as best they can to a

much greater degree. From the point of view of a parametric assessment carried out in 2006, it was possible to identify three main groups of geographical institution. The unquestioned leaders are the Adam Mickiewicz University and the Institute of Geography & Spatial Organization, PAS, ahead of a group of nine Universities of markedly varied research potential. A third group comprises higher education institutions that serve mainly teacher-training functions. The parametric assessment is, for example, in line with data on the number of domestic research projects put into effect. In the years 1994–2007 inclusive there were 58 such projects at the Adam Mickiewicz University, 50 at the Institute of Geography and Spatial Organization PAS. Coming well behind those institutions in third place is the University of Gdańsk with its 27 projects.

Playing an important role in Polish Geography Studies alongside the research institutions is the Polish Geographical Society (*Polskie Towarzystwo Geograficzne*), which has been in operation since 1918. Today's Society has 1,500 members, and there are 19 branches (the Academic branch and those based in Białystok, Częstochowa, Gdańsk, Katowice, Kielce, Kraków, Lublin, Łódź, Opole, Poznań, Radom, Rzeszów, Słupsk, Stalowa Wola, Szczecin, Toruń, Warsaw and Wrocław). There are also four subject-related branches (Cartographic, the Polar Club, the Remote Sensing branch and the Olympic). Research activity is in turn concentrated in Commissions dealing with the 10 subject areas of Geographical Education, Hydrology, Communications Geography, Settlement and Population Geography, Rural Areas, Industrial Geography, Applications, the History of Geography and Cartography, the Cultural Landscape and Tourism). The Society is the initiator and organiser of many scientific events, as well as the Publisher of a whole series of publications embracing the broad spectrum that the geographical sciences represent. The country's largest number of geographical conferences and seminars are organised by the PGS, as well as the most publications of a scientific and also popular-science profile. It is at the Society's initiative that Poland is seeking to host and organise the 2014 Regional Conference of the International Geographical Union.

Research personnel

According to the Information Processing Centre (IPC), as of 2011 the number of research employees declaring a direct link with geography was 1571, these being doctors, habilitated doctors and professors)³. The scholarly title of Professor of Geography is held by 247 people in total, while there are also 1324 doctors or habilitated doctors in the field⁴. A large group of geographers associated with teaching and training at tertiary level in fact work at institutions other than the strictly or obviously geographical (which is to say in universities of technology, agricultural academies, schools of economics and various university faculties). These

³ These data need to be treated with some caution, since they are only rather rarely updated.

⁴ In formal terms, those representing geography in Poland receive scientific degrees and titles in the Earth Sciences context.

are above all implementing tasks associated with the training of students or research in other scientific disciplines, with direct research in geography only involved to a more limited degree.

The IPC data confirm the dominance of the natural aspects over the social. The largest numbers of geographers are in physical geography (246 people), geomorphology (241), climatology (162), hydrology (118), environmental protection (81) and ecology (61). Against this background, the numbers of socio-economic geographers are modest, economic geography boasting 139 employees, the geography of tourism 74, social geography 39, and political or urban geography 26 each. Other specialisations are generally represented by 10–20 personnel. In turn, relatively large groups of geographers declare an interest in regional geography (68) and spatial organisation (64).

Of particular importance is the situation regarding research personnel in geographical institutions that produce studies within the field of geography. An expert opinion entitled *Ekspertyza o stanie nauk geograficznych* (Kostrzewski and Roo-Zielińska 2010) reveals that, as of 2008, some 125 Professors were employed, plus 138 habilitated doctors and 556 staff with doctorates. Over the last decade the numbers in the first two categories have not changed much (if with a slight upward trend), while there has been a considerable (more than 30%) increase in the numbers of personnel holding doctorates. This is probably linked with the spread of doctoral studies; in a situation where those gaining doctorates are very likely to stay on at higher education establishments, where they go on pursuing a career in science.

The most important features of academic staff made subject to periodic performance assessment are scholarly and organisational activeness. An indicator of levels of academic activity may be sought in the number and quality of publications that researchers have to their name. While it must be stressed that the quality of published work (or the place in which work is published) plays a much greater role here, this assessment is obviously going to be at least somewhat subjective. Favourable assessments are first and foremost afforded to work that can be found on the *Web of Knowledge* abstracts base. From this point of view, geographers only perform moderately well, or even below average. In turn, all comparisons made with representatives of such allied scientific disciplines as geology, oceanology and geophysics see geographers come off worse. However, Poland, like each country, has a group of geographers publishing the results of their work in the best journals, this group happily including more and more young researchers.

A further measure of how active geographers are is their participation in domestic and international research programmes, and it is worth stressing at the outset the fact that this level of participation grows with each passing year. This is above all true of applied projects (expert opinions, evaluations and diagnoses) announced by public institutions, as well as international EU projects (like ESPON, INTERREG and FP7). For example, 2008 saw 39 EU projects under implementation in Poland's geography institutions.

Contemporary trends in Polish geography – a summary

In the public imagination – in Poland at least – the usual associations with “geography” are of an encyclopaedic knowledge on the one hand, and one of the main subjects taught at various levels of education on the other. In contrast, those operating in scientific circles are much less inclined to voice homogeneous opinions regarding geography and its place in the system of science. Geographers themselves see their discipline as located in the zone where the natural and social sciences meet. This is a state of affairs that poses serious problems and challenges associated with determining the fundamental research paradigms and assessing geography as a scientific discipline. An additional problem is the departure from interdisciplinary studies that bring together elements of physical and socio-economic geography, in favour of detailed studies that help promote the already distinct division present. Progressive research specialisation is probably the most important cause of cracks in Polish geography’s substantive cohesion (though the same situation may equally well characterise geography across the world as a whole). Where stronger links between geographers do exist, they are of a social and organisational nature, and they are, it seems, undergoing gradual degradation.

The circles inhabited by geographers are fully aware of the subject-related schism that is taking place, and indeed of other problems too. Discussion on these matters is underway, and concrete action being taken to improve the situation. The latter centres around the country search for large, joint research themes of domestic or international reach, as well as striving to strengthen the positions of the leading geographical journals, and to ensure that interdisciplinary organisational undertakings are pursued (e.g. the regional conference to be held in Kraków in 2014). There is an ever fuller awareness of the need to depart from object-related studies in the direction of problem-related ones (e.g. challenges associated with globalisation processes, the natural and socio-economic consequences of climate change, the development of non-conventional energy sources, and so on). Also of considerable importance are activities seeking to popularise the attainments of geography among the wider public, and likewise with those working in other areas of science and academe.

The fact that today’s Polish geography has its problems should not be allowed to obscure the fact that it has a string of achievements to its name. The most important of these relate to growth in the importance of applied research. Geography in Poland continues as before as the classical (cognitive and descriptive) discipline, but it is also taking on the features of a practical science – as is attested to by the increase in the number of research tasks and projects being commissioned to meet the needs of practice. The work in question is first and foremost in the form of diagnoses, forecasts and expert opinions, mostly concerned with the balanced or sustainable management of space (and hence the avoidance and prevention of extreme phenomena), as well as the evaluation of how assistance funding is being used and of the strategies and plans for local and regional development that have been drawn up. An ad-

vantage enjoyed by geography in applied research is the way in which it links the theories and methodologies from the natural and social sciences, as well as “spatial vision” in respect of local and regional specifics. These attributes gain a positive assessment from those commissioning projects either public or private, thanks to the research carried out by geographers being competitive with analogous tasks carried out by the researchers and institutions active in other disciplines.

Where the development of personnel and institutions is concerned, the condition Polish geography finds itself in today would have to be assessed positively. A small increase in numbers of professors and habilitated doctors has been accompanied by a major increase in numbers of staff with doctorates. This attests to the development of potential within the discipline and to a “breath of fresh air” being provided by a younger cadre that can bring into geography new ideas and solutions and a different way of looking at the world. The increased staffing levels have gone hand in hand with the development of the scientific institutions for which and in which they work. This mainly concerns the separation of certain units into independent entities, as well as the creation of some completely new ones, and of course increases in the numbers of identifiable sub-units within differential well-established institutions. That said, institutional breakups continuing to the point where “fragmentation” can be said to be occurring obviously have the above attendant problems looked at in more detail.

Polish geography is faced with several important choices that will be of significance in determining its future development. This is especially true of research directions and their subject matter, as well as organisational forms. When it comes to the choice being made, an important role is played by experimentation and the conclusions arising out of developments in world geography.

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