

COMENIUS UNIVERSITY BRATISLAVA
FACULTY OF NATURAL SCIENCES



COMENIUS
UNIVERSITY
BRATISLAVA

THE 14TH SLOVAK-CZECH-POLISH SEMINARIUM

*“Making geography matter in Central and
Eastern Europe”*

BOOK OF ABSTRACTS

Marcel Horňák
Roland Németh
editors

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June 11th – 13th, 2025

Smolenice, Slovakia

2025
Comenius University Bratislava



**FACULTY
OF NATURAL SCIENCES**
Comenius University
Bratislava



Editors

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Mgr. Roland Németh



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About the seminarium

The **14th Slovak-Czech-Polish Seminar** continues the long-standing tradition of meetings among geographers from Slovakia, the Czech Republic, and Poland, which dates back to the 1960s and was successfully renewed in the 1990s with regular biennial sessions. This year's seminar will take place on **June 11th – 13th, 2025**, in the inspiring surroundings of **Smolenice Castle, Slovakia**. The seminar titled **Making Geography Matter in Central and Eastern Europe** seeks to create a platform for meaningful exchange of knowledge, ideas, and experiences, while fostering strong professional and friendly connections across national borders.

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BETWEEN TRADITION AND MODERNITY - THE POLISH, CZECH AND SLOVAK ROAD TO ELECTROMOBILITY IN URBAN PUBLIC TRANSPORT

The urgent need to put limit on negative environmental impact of transport, accompanied by increasing consciousness of negative results of excessive private motorisation – in particular in urban areas – opens up a wide range of development opportunities for municipal transport. Public transport electrification is increasingly perceived as one of the best solutions to be introduced here. The goal of this paper is to present the provision of both traditional catenary and modern battery electric vehicles in Polish, Czech and Slovak towns and cities and a comparison of policies adapted in these three countries. These three Central European countries provide very interesting evidence for different ways in which towns and cities respond to these transport challenges. This is due to the fact that in this area – unlike in most Western Europe and North America – electric means of municipal transport have never been withdrawn on large scale. In fact, almost all regional centres in the Czech Republic and Slovakia and most in Poland are still served either by traditional trams or trolleybuses. What is more, these countries – in particular Poland – are also characterised by rapid and large scale introduction of battery electric buses, manufactured mostly by domestic producers. Interestingly, the long experience in the first-generation electromobility is an important factor influencing the development of that of the second generation – as the introduction of in-motion-charging trolleybuses in Prague demonstrates. The analyse is based on authors' database of electric vehicle in towns and cities in the three analysed countries as well as on study visits and interviews with public transport organisers and operators in selected centres.



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MULTICULTURAL HERITAGE OF THE SPIŠ REGION ACROSS THE CENTURIES: TANGIBLE AND INTANGIBLE LEGACIES IN THE CULTURAL LANDSCAPE

The presentation shows the results of research on the multiculturalism of the Slovak part of the Spiš region.

Spiš is an area with a rich and complex history. Until the mid-20th century, it was a territory jointly inhabited by various national and ethnic groups, including Slovaks, Poles, Germans, Hungarians, and Ruthenians. In the early Middle Ages, this borderland region was part of both Poland and Hungary, before ultimately falling entirely within Hungarian territory. In the 13th century, Spiš became an area of German colonization, and from the 16th century, it saw the arrival of Ruthenian-Wallachian populations. In the 15th century, the region was divided between Poland and Hungary, resulting in a territorially fragmented mosaic of both states. In the second half of the 18th century, it was annexed by Austria and, from 1867, formed part of the Hungarian half of the Austro-Hungarian Empire. After 1918, Spiš was divided between Poland and Czechoslovakia, and today the region lies within the borders of two countries: Poland and Slovakia.

For several centuries, Spiš has functioned as a cultural melting pot. It therefore constitutes an excellent case study for exploring the coexistence and interpenetration of the cultures of various Central European nationalities. Fieldwork conducted in one of the Polish enclaves that existed between 1412 and 1772—Spišské Podhradie—has revealed tangible traces of multiple cultural traditions, particularly those of the Polish, Hungarian, Slovak, and German communities. For example, during the course of research, a bronze baptismal font bearing the seal of Polish Duke Bolesław the Pious was identified in the parish church of Spišské Podhradie. The Polish presence in Slovak Spiš is further evidenced by several Marian columns, most of which were erected in the first half of the 18th century under the patronage of the Spiš district governor, Teodor Konstanty Lubomirski. Another marker of the region's multicultural heritage is a bell from 1761, dedicated to Our Lady, Queen of Hungary, found near the enclave's border and now hanging in the belfry of the village of Kotuň. The German heritage of the area is reflected in elements such as the preserved medieval spatial layout of Spišské Podhradie.



The findings contribute to a deeper understanding of the long-term processes shaping the cultural landscape of borderland regions. They also offer valuable insights that may inform national, regional, and local cultural heritage protection policies.



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INTERSTATE VISITS IN THE PANDEMIC TIMES: CASE STUDY OF CZECH REPUBLIC AND ESTONIA

Covid-19 pandemic led to disruptions in the bilateral economic and political relationships between countries. While economic impact was well documented by previous research, we focused on analysing the effect Covid-19 had on the outgoing interstate visits of the Ministry of Foreign Affairs (MFA) officials to stem light on how diplomacy worked in the crisis times. Using reports published and news reported by the Ministries of Foreign Affairs of the Czech Republic and Estonia, we compiled a database of the interstate visits of their MFAs officials. We do not include incoming foreign visits as these are likely not initiated by the country of interest and are also likely to be reported with a lower level of precision. Our database spans from 2018 to 2021 and includes 355 interstate visits of the MFA of the Czech Republic and 380 interstate visits of the MFA of Estonia. Our data suggest that in the case of the Czech Republic and Estonia, the number of interstate visits decreased to 1/4 and 1/3, respectively, between 2019 and 2020. In 2021, the number of visits in comparison to 2020 doubled for both countries but still fell significantly behind the amounts reported in 2019. However, once taking into account bilateral virtual calls of the MFAs representatives, the difference in bilateral visits/calls between 2019 and 2020 represents only 20%, suggesting that Estonia managed to partly tackle the Covid-19 impact on bilateral relations by successfully moving to the online sphere. As for the Czech Republic, even after incorporating the bilateral calls, the difference in bilateral visits/calls represented 50%, suggesting that the Czech Republic did not switch to virtual environment as successfully as Estonia did. In 2021, the Czech Republic still conducted one-third of the interstate visits by virtual means, while Estonia did one-fourth. Overall, the case study of Estonia and the Czech Republic illustrates that due to the Covid-19 pandemic, 50% of interstate visits of the MFAs of these two countries in 2020 were conducted virtually, allowing a decrease in the adverse effect on the frequency of bilateral meetings of these countries. However, caution is needed when interpreting the data, as for the interstate visits, the intention of the country to meet can be prosied by its representative travelling abroad, while for the virtual calls, it is not possible to distinguish between outgoing and incoming visits in the same way.



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RECENT ADVANCES IN REGIONAL INNOVATION SYSTEMS STUDIES

This presentation aims to discuss recent advances in RIS studies: the role of organizational-level and system-level agency, regional governance modes and evolutionary paths of regional industries.

In particular, in contrast to GVC/GPN theories, where a typology of various modes of governance has been developed decades ago, RIS theory so far lacks a proper conceptualisation of RIS governance. Therefore, I developed a fourfold typology of RIS governance modes based on the strength of public administration and the inclusiveness of the institutional set-up in the region. I argue that a well-developed RIS governance helps companies pursue more radical paths, and ambitious evolutionary paths of industries require vigorous system-level agency.



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WE ANALYSE MUCH BUT PREDICT LITTLE. IS GEOGRAPHY ABLE TO HELP (NOT ONLY) DEMOGRAPHERS TO MAKE FORECASTS?

As the title of the presentation states, it deals with the importance of forecasting in geography. Definitions of geography that explicitly include forecasting as part of its subject are rare, though AI tools provide a quite positive answer towards the role of geography in forecasting the future. The main potential reasons for the low number of geographical studies on the WoS/SCOPUS that make forecasts of selected geographical processes or structures are presented. We also show few exceptions where future scenarios have been postulated and forecasts made. The question of whether geographers are "obligated" to make forecasts is debated and whether the call for more frequent forecasting is not misplaced. The presentation will briefly explain the importance of the difference between forecast and projection. It is argued that geographers should make (at least) projections, scenarios of future development, more often. Some examples are shown in which forecasting or projection scenarios would be useful for demographers, especially (but not only) in the case of migration forecasts. The presentation will touch on the uncertainty and complexity of geographic forecasts. Phenomena such as assumption drag, developmental turning points and some others are presented on the specific examples



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FLOOD RISK MANAGEMENT IN EU COUNTRIES

The primary objective of the research is to evaluate the effectiveness of non-technical flood protection measures in flood risk management, using the experiences of Germany, Poland, and Slovakia as case studies. The analysis examines the relationships between changes in land use within flood hazard areas (with a 1% probability of flood occurrence) from 1990 to 2018 and legislative changes in the three countries that regulate land development in these areas. By identifying historical changes, the study aims to develop methods and procedures useful for forecasting future developments in flood-prone areas.

The findings reveal a strong correlation between land-use changes in the analyzed areas and legal frameworks, particularly the restrictions introduced with the implementation of the EU Floods Directive (2007/60/EC). The intensity of development in flood-prone areas varied over distinct periods across the three countries. In Poland and Slovakia, two distinct phases were observed: the first, spanning 1990 to 2006, saw the highest intensity of development, primarily due to the absence of adequate legal provisions to restrict construction in flood-prone areas. The second phase, from 2006 to 2012, was marked by the influence of EU regulations and a subsequent reduction in development intensity. In contrast, Germany experienced the highest development intensity between 2006 and 2012, showcasing a different pattern compared to Poland and Slovakia. These findings underscore the significant role of legal frameworks in shaping land-use practices within flood hazard areas.

Acknowledgement

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LOCAL OR SUPRA-LOCAL? A COMPARATIVE ANALYSIS OF SELECTED PATRONS OF POLISH PUBLIC PRIMARY SCHOOLS

Commemorating national memory by naming schools and other educational institutions after national heroes important for the history of the country can be considered a key instrument for maintaining national identity, starting with the youngest generation. In my work I analyse this using the example of primary schools in Poland - most of the more than 12,000 have a patron. Some of them have chosen nationally known persons or events (both secular and church-related), but some have opted for distinctive, often local patrons, thus marking the distinctiveness of their micro-region. The range of school patrons is very diverse - they include writers, saints and blessed of the Catholic Church, military commanders, social activists, even national symbols and many others. The name of each of the 15 most frequently chosen patrons is borne by a minimum of 100 schools across the country, the most popular being John Paul II. Mapping the spatial distribution of the various patrons, it appears that the boundaries from the time of the Partitions are still visible. Moreover, some patrons, such as Queen Jadwiga, only appear in one part of the country, but in very large numbers. It would seem, therefore, that there is hardly a rule in the dispersion of these schools, but even in this case some regularities can be observed. Research into the distribution and frequency of individual figures as patrons of schools can contribute to a better understanding of the social and political processes taking place.



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URBAN AND RURAL DEVELOPMENT THROUGH THE EYES OF LOCAL COUNCILLORS IN SLOVAKIA

The development of urban as well as rural municipalities is fundamentally influenced by the attitudes and priorities of their key representatives. In addition to the leadership role of mayors, members of local councils are also major actors. Decision-making powers over key development documents and many other partial aspects of development are concentrated in their hands. This paper draws on a survey conducted among local councillors in Slovakia during October and November 2023, as part of the international project 'European Councillor Survey'. Based on responses from over 900 participants, we assess their attitudes toward various aspects of urban and rural development. We focus on local development priorities, such as infrastructure building, housing support, attitudes toward energy saving and climate change, service provision and accessibility. The results are structured according to size categories of municipalities, NUTS2 regions, as well as characteristics of the respondents. Selected attitudes are presented in an international comparative perspective.



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**TRADITIONS OF CULTURAL HERITAGE OF EAST
BOHEMIA. TOURIST AND CULTURAL POTENTIAL OF
MONUMENTS IN THE HRADEC KRÁLOVÉ AND
PARDUBICE REGIONS IN RELATION TO UNESCO
HERITAGE**

Presentation of the first results of the project, which aims to apply the results and knowledge from the field of cultural heritage for the decision-making sphere within the Hradec Králové and Pardubice regions. The main goal is to propose suitable locations and a procedure for inscription on the UNESCO heritage list based on (sharing good practice), including determining the benefits, risks that inscription could bring in the form of higher attendance, media interest, investors and tourism development, a guide for destination management and other actors. A comparative study with monuments (existing and potential) will be created, and cooperation will also take place with cross-border regions, especially the Opole and Lower Silesian Voivodeships in Poland.



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PHANTOM OF THE BALLOT BOX: PERSPECTIVES ON PHANTOM BORDERS RESEARCH IN ELECTORAL GEOGRAPHY

Phantom borders are former political borders that, despite no longer existing in administrative structures, continue to shape social and spatial realities. Among the most consequential of these realities is voting behaviour, a spatial practice simultaneously derived from different population structures on the opposite sides of the phantom border and further shaping them. Drawing on examples from East-Central Europe, we demonstrate how such phantom borders relate to people's attitudes and value orientation in the territory and what potential the concept of phantom borders has in the study of electoral behaviour and vice versa. Elaborating on concepts such as left-behind places, place resentment or spatial polarization, we assess the relation between phantom borders and voter (non-)turnout and illiberal political actors' electoral gains. Our contribution is not only empirical and conceptual but also methodological. With an innovative methodological approach, we quantitatively measure and map the existence and effects of phantom borders, both in terms of their changes over time, their spatial heterogeneity and their multi-scalar character.



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THE USE OF EU FUNDS BY ENTERPRISES FOR RENEWABLE ENERGY SOURCES - REGIONAL APPROACH

The objective of the present study is to evaluate the extent, configuration and geographical diversification of the utilisation of Regional Operational Programme funds by enterprises in Poland since 2014 in the domain of RES. The study was conducted employing a systematic review method and statistical techniques on empirical project implementation data pertaining directly to investments in RES installations. The data source was the list of completed projects financed by the European Funds in 2014-2020 (as of 13.08.2024), supplemented by data from the Register of Small Energy Producers of the Energy Regulatory Office. The Regional Operational Programmes (ROPs) are an important tool for obtaining financing for the development of renewable energy source (RES) investments, which can be used by companies. The survey indicated that companies most often obtain financial support for photovoltaic (PV) installations, which, despite their popularity, generate much lower production capacity compared to installations based, for example, on biomass. The total allocation of funds under the ROP directly translates into regional RES energy generation capacity. In the context of implementing a strategy for transition to a low-carbon economy, a more appropriate criterion for awarding subsidies to enterprises should be the planned production capacity of installations rather than their number.



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ARE OPEN DATA SUFFICIENT FOR LOCAL URBAN GREEN SPACE MAPPING? INSIGHTS FROM THE CZECH REPUBLIC

Urban greenery plays a crucial role in enhancing quality of life in rapidly growing cities, providing essential ecosystem services, such as biodiversity support, climate regulation, and mental well-being. This study examines the use of open national datasets for mapping urban green space (UGS) in the Czech Republic (based on the example of two towns), specifically ZABAGED (ZBG), Consolidated Layer of Ecosystems (CLE), and Cadastre data. The aim of this study is to assess the suitability of these datasets for UGS identification, with a focus on their resolution, accuracy, and cost-effectiveness in comparison with data collected in the field. The results demonstrate that the ZBG dataset is the most reliable dataset for identifying formal UGS, with a high overlay percentage with field data. Although the CLE and Cadastre data show promise in specific cases, such as identifying informal green space and other types of greenery, their overall accuracy is lower. This study examines the potential of combining different datasets to improve UGS mapping accuracy, particularly for smaller towns, where detailed mapping is essential for urban planning. Additionally, while open datasets are useful and cost-effective, certain limitations remain, for example, in capturing complex or linear UGS features. The findings highlight ZBG as the most suitable open dataset for UGS mapping in the Czech Republic, with possibilities for further refinement via additional data sources, and suggest the use of ZBG data for UGS monitoring because of its high reliability and updating every 3-4 years.



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THE IMPACT OF THE PLANNED CABLEWAY ON THE CHANGE IN ACCESSIBILITY OF PUBLIC TRANSPORT IN THE BOHNICE RESIDENTIAL AREA IN PRAGUE

Quality of life, level of socioeconomic development, access to services and education are among the many aspects affected by the quality of the transportation system and the associated level of transportation accessibility. The main objective of this study is to determine the changes in accessibility to public transport in the residential area of Bohnice in Prague as a result of the cableway construction plan. The spatial scope of the article covers the territory of the capital city of Prague with a special focus on the northern part of the city where the Bohnice residential area is located. An accessibility analysis of public transport was carried out, which showed good accessibility in the areas neighboring the Bohnice residential area, except Praha 6, and reasonably acceptable accessibility to the city center. In addition, the concept of improving the functioning of public transport in the Municipal Districts of Praha Troja and Praha 8 was analysed and its impact on the changing time accessibility was assessed. As a result of the investment, transport accessibility has improved, especially between the Bohnice residential area and Praha 6. Thanks to the analyses carried out, it was possible to give a positive opinion on the planned construction of the cableway and recommended the implementation of the investment.



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WARSAW EATS OUT. URBAN GASTRONOMY IN TIMES OF DISARRAY

Urban gastronomy serves as a valuable lens for observing social and cultural transformations within urban spaces (Kowalczyk, Derek 2020). In postmodern societies, food has emerged as a significant source of identity (Richards 2002), making the study of urban gastronomy important for understanding cities and their inhabitants. This phenomenon is particularly evident in Central and Eastern Europe, where the geopolitical shifts of the late 1980s and early 1990s have shaped the urban gastronomy landscape, which has experienced unprecedented growth over the past 35 years (Derek 2020). However, the last five years have posed challenges for this sector. The COVID-19 pandemic revealed its vulnerabilities, while the ongoing war in Ukraine and subsequent inflation have hindered its fast recovery.

This presentation aims to illustrate how urban gastronomy has adapted to these challenges, focusing on Warsaw as a case study. Field research was conducted in three types of urban districts: the functional centre of the city, the tourism-dominated Old Town, and three distinct residential districts that had previously experienced gastronomic development before the pandemic. The research involved an inventory of eating establishments during the autumn seasons from 2020 to 2024. The presentation will highlight changes in both the number and types of these establishments.



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“MEMORY OF THE LOST LAND”. THE ATTITUDES OF THE LOCAL COMMUNITY TOWARDS THE TATRA NATIONAL PARK

The aim of the study is to present the attitudes of the local community towards the Tatra National Park (Polish Carpathians), in the context of the nature-oriented value system represented by this community, as well as in the context of the conditions that are the source of social conflicts in relations with this Park. In order to explore the nature of these relations a large-scale quantitative a door-to-door survey of 1,120 inhabitants from 26 towns around Tatra National Park (TNP) were conducted. The community is emotionally connected to nature and most people have a favorable attitude towards nature conservation. However, the attitudes of local residents towards TNP are polarized. A part of the community shows entitlement attitudes towards the park's natural resources along with expectations of increased control over the park's operation. About 30% of the surveyed population has limited trust in decisions made by the TNP administration. The source of the conflict is the fact that private land in the Tatra Mountains was taken over by the state in order to create this national park in the 1960s. The memory of the expropriation is still alive among local community and families pass this memory on to next generations. The development of mass tourism resulted in rise in the scale of social claims for TNP resources. The local context of attitudes is a serious obstacle to building an effective TNP conservation policy, and also may pose a threat to the Tatra Transboundary Biosphere Reserve.



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CREATIVITY IN THE PERIPHERIES? SPATIAL PATTERNS OF CULTURAL AND CREATIVE INDUSTRIES IN THE POLISH PERIPHERAL AREAS

Studies of creative industries focus predominantly on urban environments. However, there is a growing interest in creative individuals and businesses in peripheral areas, distant from major creative hubs (Grant et al. 2014; Hautala 2015; Costa & Lynch 2021; Silva et al. 2023). These areas are marked by remoteness, limited accessibility, low population density, depopulation, and lower socio-economic development (Novotný et al. 2015; Pugh & Dubois 2021; Churski et al. 2024), in contrast to urban clusters that foster creativity. Peripheries, however, can be attractive, offering lower living costs and tranquillity conducive to creative work. They can serve as a source of inspiration and creative identity while providing embeddedness in local social networks. A peripheral position necessitates increased mobility to maintain connections with creative centres, though digital technologies can, to some extent, replace physical travel. The pandemic has reinforced earlier trends in remote working and creative nomadism (Hautala & Jauhiainen 2019; Hautala & Nordström 2019; Bürgin et al. 2021; Costa & Lynch 2021; Mathisen et al. 2024; Silva et al. 2024).

The aim of our study is to analyse the location patterns of creative companies in Poland before and after the pandemic (2019–2024) to identify their hotspots in peripheral areas. We supplement these findings with preliminary results from a qualitative study of a peripheral creative ecosystem.



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QUEER GEOGRAPHY AND ITS CONTRIBUTION TO POLITICAL GEOGRAPHY: THEORETICAL PERSPECTIVES AND APPLICATIONS

The report will focus on queer geography as a theoretical framework aimed at destabilizing heteronormative norms that influence the spatial organization of society, allowing for the creation of more inclusive spaces in terms of gender inequalities, not only for LGBTQ+ people but also for women.

The geography of sexualities is not only concerned with identities, but also with broader power relations, especially in the context of heteronormativity or patriarchy.

By connecting theoretical foundations with practical applications in political geography, this report will demonstrate the potential of a queer perspective for analyzing complex relationships of power, marginalization, and identity in contemporary society. This connection will be illustrated through the author's master's research on the status of LGBTQ+ people in Central Europe and the planned doctoral research.

The master's research focused on analyzing the status of LGBTQ+ people in selected Central European countries, examining shifts in discourses on LGBTQ+ rights and positions within these states. The planned doctoral research will explore the influence of geopolitical factors on LGBTQ+ discourses in the Baltic states. The aim is to identify how different political, cultural, and historical contexts shape the status and rights of LGBTQ+ people in Estonia and Lithuania and how theoretical concepts of queer geography can be applied to understand and address these challenges.

The report aims to contribute to the debate on the significance of queer geography for political geography and to demonstrate how this approach can enrich our understanding of the spatial dimensions of power, identity and inequalities.



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HABANS AND THE MORAVIAN BRETHREN IN THE CULTURAL LANDSCAPE OF CENTRAL EUROPE

The reform movements in the Catholic Church, which began in the 12th century, reached their culmination in the 16th century, and the year 1517 became an important turning point in European history. The new Protestant movements that were gradually emerging and taking shape came into clear conflict not only with the Catholic Church, but also with other reform movements that gradually began to emerge in Europe, which became the seed of the so-called "free churches".

The aim of the study is to characterize the legacy of two Protestant religious minorities that shaped the image of social, economic and cultural life of Central Europe in the past centuries, visible in the contemporary cultural landscape of the region. Both tangible and intangible elements of the cultural heritage of the Habans and the Moravian Brethren were analyzed. The Habans were members of an Anabaptist community from the early 16th century, who came from Switzerland and Tyrol to Moravia in search of an opportunity to live in a tolerant environment under the care of the Protestant Moravian nobility. Their almost 100-year existence in these areas (today's Czech Republic, Slovakia, Austria) contributed to the economic growth of the region and the initiation of new forms of crafts and technologies.

The Moravian Brethren, as the last successors of the legacy of the Czech Brethren, had to leave Moravia at the beginning of the 18th century and seek refuge in Silesia. Their settlements began to be established there, which transformed into important centers of social and economic life. Their settlements were modeled on the spatial layout of the Saxon Herrnhut.



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HOW TO EVALUATE CURRENT CHALLENGES AND IMPACTS OF TOURISM IN THE KRKONOŠE NATIONAL PARK

Tourism in the Krkonoše National Park (KRNAP) represents an important source of economic benefit for the region, but at the same time puts pressure on natural ecosystems and local residents. However, there is no strategic document for the development of tourism or a concept and plan for monitoring in cooperation between KRNAP and the destination agency. The key question is how to measure and evaluate the impact of tourism and how to find a balance between supporting tourism, protecting nature and preserving the authenticity of the place. Due to the imperfections of classic primary registration data, modern technology methods (including big data analysis) are used, which offer new ways to monitor and manage the impact of tourism. This data (e.g. from mobile networks, applications and social media) are used to map the movement of visitors and compare with traditional statistics such as the number of visitors to collective accommodation establishments or data from field surveys, questionnaires and interviews of selected key actors. The results indicate that the number and capacity of accommodation facilities reported by traditional sources significantly undersize the sector of new rental apartments. These have not only weak support in the survey methodology, but also in the legislation and the tax system itself, and do not bring municipalities the income that would be appropriate to their importance due to the massive growth of this segment. The paper offers evaluation options and examples of measures that can be taken on the basis of data analysis, such as dynamic control of access to busy locations as a defense against manifestations of spatially and temporally concentrated overtourism. The data enable a design of routes to distract visitors or inform tourists about environmental risks. Special emphasis is placed on the sustainability of tourism and the preservation of natural heritage. The local government perceives clear restrictions on the part of landscape protection institution (KRNAP), which do not allow not only extensive development of other tourist activities, but also support for the preservation of modern residential functions for local residents and prevent them from moving out of the region.



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RELICS OF OLD BORDERS AS EXEMPLIFIED BY THE POLISH SPISZ FIEFDOM - THE CASE OF THE ENCLAVE AROUND SPIŠSKÉ PODHRADIE IN SLOVAKIA

Spišské Podhradie was one of the enclaves that formed the Spiš Pledge. In 1412, the Hungarian king Sigismund of Luxembourg transferred Spišské Podhradie, along with fifteen other towns, to the Polish king Władysław Jagiełło as collateral for a loan. As a result, the Spiš Pledge became a Polish starosty and remained within the borders of the Kingdom of Poland for the next 360 years. In the late 18th century, this pledged territory was incorporated into Austria. After 1918, the area of the former Spiš Pledge was not included within the borders of the re-established Polish state. It became part of the newly formed Czechoslovakia, and since 1993, it has belonged to Slovakia. The aim of the study was to identify and document the preserved relics of the borders of the Spiš Pledge. The first stage involved tracing the historical boundaries of the pledge using old maps. A cartographic query was then conducted to collect maps of the Spiš Pledge area from its existence up to the present day. The source material was analyzed and selected, with maps chosen for further work. The next stage involved georeferencing and vectorization of selected cartographic content. Finally, the data were exported and implemented using a suitable mobile application and tested on several devices. During fieldwork, various elements that definitely or presumably marked the historical boundaries in the field, such as boundary mounds, boundary posts, and traces of other former markers, were identified, inventoried, and documented photographically. The analysis of the collected material enables a reconstruction of the course of the historical borders and an assessment of the degree to which they have been preserved in the modern landscape. The conducted research contributes to a better understanding of the contemporary cultural landscape of Spiš. The presentation highlights the significance of fieldwork as a tool for verifying and supplementing historical research, enhancing our understanding of historical processes.



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MAPPING LOCAL FOOD HERITAGE IN POLAND

The concept of ‘local food’ seems to address some of the problems with food which we face nowadays: it is associated with sustainable and healthy production and consumption patterns, supports “weak” actors in the system (farmers in particular), and is more environmentally-friendly (lower carbon footprint). ‘Local food’ is not only about geographical proximity; it is also about farming what is strongly tied to the environmental conditions of a place. Heritage is a key concept here: at the local level, food heritage is usually based on the availability of natural resources, present or historical, as well as local people’s attitudes to nature.

The aim of this research is to identify and map local heritage food in Poland, as well as to explain its distribution with ecological, economic and social data. To achieve this goal we used the “List of traditional products”, which is developed by the Ministry of Agriculture and Rural Development. It includes over 2100 products and dishes from different categories: meat, dairy, bakery and confectionery products, honey, fruit and vegetables, ready meals and dishes. By mapping all those products, we want to identify clusters of local food in Poland, and explain their location by a set of geographical factors.

The research is conducted within the project: Localinary. “Linking people and nature in local heritage food. A social-ecological system approach”, funded by the National Science Centre, Poland” (UMO-2023/49/B/HS4/00769)



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FROM LOCAL TO METROPOLITAN FOOD SYSTEMS – HOW TO FEED THE CITY?

In recent decades, the eyes of researchers of sustainable urban food systems have been turned towards locally produced food, its distribution based on shortened supply chains and the impact it has on the food security of residents. However, the ongoing spatial expansion of cities, blurring boundaries between urban centres and countryside and the growing interconnectedness of different urbanised areas mean that we increasingly focus on metropolises in research on urban sustainability. The strict adherence to the local scale in food studies limits our ability to examine the complex relationships between different actors in food systems. In turn, the shift from a primarily local to a metropolitan perspective, allows us to move away from the ingrained approach based on the separation of urban and rural areas, while focusing on the mutual relations and spatial, functional and institutional connections between them. Given the growing importance of supra-local strategic documents, this approach is particularly useful in the context of the implementation of multi-scale solutions in the field of food production, processing, distribution and consumption. The aim of this presentation is to introduce the initial conceptualization of the metropolitan food systems, to present the benefits of not limiting food research in cities to the local scale, and to indicate possible directions for further studies. The presentation draws on research on diverse elements of food systems conducted in recent years in various metropolises of different regions of the world and is a contribution to the current discussion on ways to increase urban sustainability.



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THE MOBILITY OF WORKING STUDENTS: BETWEEN WORK COMMITMENTS AND ACADEMIC DUTIES

Students form a group characterized by specific mobility behaviours. Beyond their studies, many university students now commonly engage in part-time work, requiring them to balance academic commitments with employment. This research focuses on analysing the daily mobility patterns of working students. Grounded in the geography of rhythms and the concept of pacemakers, this research assumes that the mobility behaviour of working students is shaped by their academic schedules, study obligations, and working hours. The analysis of the questionnaire survey conducted in 2024 in the Brno Metropolitan Area (Czechia) revealed that the commuting patterns of working students depend significantly on the phase of the academic year—whether it is the lecture period, exam period, or holidays. A key finding is that it deviates from general commuting patterns in several ways, especially regarding weekly frequency, travel days, or the timing of journeys. An important aspect of student commuting is travel between the university and the workplace during the day. Many students experience longer journeys from university to work, often occurring at varying times. This study highlights the importance of examining commuting patterns among different, often marginal, populations, as these groups may exhibit distinct mobility behaviours.



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POLISH WRITERS ON AFRICA – AN INTRODUCTION TO THE SUBJECT

Polish-African ties, although still not very intensive, date back to the times of the Polish-Lithuanian Commonwealth. Polish sailors, missionaries and explorers travelled to Africa or along its shores as early as the 17th century. In later centuries, this group was joined by journalists, adventurers, writers and in modern times – travelbrities. In addition to figures such as Maurycy Beniowski, Henryk Sienkiewicz and Ryszard Kapuscinski, widely known in the world, this group also includes lesser-known Poles who have been to Africa and written something about the continent. Many written traces of their travels remain – in the form of novels, letters, diaries and memoirs. However, these works have not yet been collected into a single catalogue covering the period from the 17th to the 21st century. The aim of the speech is to present the complexities of a project aimed at filling this gap in research, as well as to familiarise the audience with the subject of Polish writing on the African continent and the geographical threads hidden therein. Each author writing about Africa mentioned specific places inhabited by specific people or social groups. Since the authors rarely had substantive preparation for learning about the world that was new to them, they described it superficially, often creating stereotypes that, along with their work, permeated Polish and other societies. Since many stereotypes about Africa are still present in Poland, it is worth examining to what extent they are imported from abroad and to what extent they are based on Polish discovering of this continent.



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DIFFERENT MEASUREMENTS OF PHYSICAL DISTANCE IN TRADE OF GOODS

Distance is one of the basic geographical concepts. It is a key element of various economic analyses, including those related to trade, e.g. gravity model of trade. The popularity of its use is because of highly successful empirical analyses, despite its simplicity. Unfortunately, there is a lack of uniformity in measurements of distance. There is assumption that the distances between them can be defined as the distance between their capitals or largest cities, less often between their centroids. However, these are not the only possibilities. Distance can be calculated in many other ways, based on average distances between multiple cities, centers of gravity or equidistance. An additional field for measuring distance is provided by remote sensing methods, which allow obtaining data for the entire world, without worries about their quality. There is particularly great potential in data on light emissions at night because they are comparable on the actual place of economic activity. Therefore, it is important to standardize this issue and determine the differences between various distance measures and their impact on the analyses.

To this aim, this work will develop a gravity model of trade using many different measures of distance, based on literature review, and on cartographic or remote sensing methods. Then, using the AIC and BIC information criteria, it will be determined which of them gives the best estimates. Proprietary measures based on remote sensing data are expected to provide the statistically better results. However, no major differences are expected between the most popular measures.



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WELL-BEING DERIVED FROM THE RIVERSCAPE: LINKING COMFORT AND DISCOMFORT AGENTS

Intentional interactions with nature have a pivotal role for urban societies as they can shape visitors' physical and mental well-being. However, most often recognised positive agents of well-being— analysed here under the cultural ecosystem services framework—are just one side of the coin. Disturbing and unpleasant nature-related phenomena (ecosystem disservices), along with man-induced negative effects, also have to be considered. Understanding synergies and/or trade-offs among well-being agents, along with identifying their environmental drivers, may foster the sustainable management of urban natural spaces. This study employs the results of a representative survey to identify these interconnections in the context of visits along the Vistula River in Warsaw, Poland. Potential comfort and discomfort agents were assessed according to the respondents' memories (the citywide scale). Then, up to five of the most significant well-being agents were mapped and enriched with visitation preferences (the local scale). While factor analysis clearly distinguished positive and negative agents in the citywide scale, local-scale associations are not that straightforward, with principal components revolving around (1) emotional attachment to the river and both benefits and drawbacks of riverine nature; (2) nature-related discomfort and lacks of amenities; (3) sport and creativity opportunities and safety concerns, and (4) pros and cons of social interactions. These four key influences on visitors' well-being are significantly linked to the characteristics of the visited places and time preferences of visits, with viewshed size and area homogeneity as variables impacting all of them. This research provides a conceptually-integrated evaluation of people's attitudes towards urban riverscapes.



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THE ROLE OF RELIGION IN THE INTEGRATION OF UKRAINIANS IN CZECHIA - GENERAL BACKGROUND

Russia's imperial aggression towards neighbouring Ukraine has also brought with it a significant emigration of Ukrainians, especially to Europe and Czechia, which has transformed and is transforming the host regions. Ukrainian immigrants are mostly trying to integrate into the host state and religion plays an important role in this process, thus becoming an important source of social capital for immigrants. The religiosity of Ukrainian migrants is quite high (more than 55%) and significantly exceeds that of the Czech majority. Although the majority of Ukrainians subscribe to the Orthodox faith, there are also many evangelical Christians among the war refugees (0.5 million inhabitants/5% of the Czech population), who are much more active than the Orthodox. Some are trying to join existing evangelical churches and others are forming homogeneous Ukrainian congregations, often in conjunction with their home congregations in Ukraine. The Sunday service is very important for Ukrainians, but so far they do not participate in it very much (workload), but nevertheless churches allow immigrants to take a break from their everyday worries, for example through prayer immigrants can find a way to help themselves from their problems. Christianity can thus give Ukrainian immigrants new hope in their marginal role in Czech society. Church communities show strong social capital and create a platform for new contacts and communication with other people. Churches in Czechia are also a source of Ukrainian cultural life in Czechia. In the opinion of their representatives, churches also help Ukrainian immigrants by facilitating their integration into Czech society.



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INTERNAL PERIPHERIES IN POLAND - GEOGRAPHY MATTERS

The spatial differentiation of the level of growth and socio-economic development forms the basis for the delimitation of various developmental types of territories, including "left behind" areas, and for exploring effective methods to support their development. Explaining these patterns is not possible without utilizing the rich methodological and theoretical contributions of socio-economic geography.

The objective of this study is to present an original delimitation and typology of internal peripheral areas in Poland, structured within the framework of functional urban areas (FUAs). The presented findings summarize the implementation of the TIPERICO research project (www.tiperico.web.amu.edu.pl), funded by the National Science Centre in Poland (grant UMO-2020/37/B/HS4/01034): Trajectories and challenges of internal periphery development in new conditions of coherence post SARS-CoV-2. The project aimed to identify patterns of socio-economic development changes in selected internal peripheral areas during the post-SARS-CoV-2 period.

The originality of the applied approach lies in the use of the extensive theoretical and methodological framework of socio-economic geography to explain the patterns of contemporary spatial disparities in socio-economic development. Building on this foundation, we employed a wide set of indicators to describe the distinctive characteristics of internal peripheries in the spatial structure of functional urban areas (FUAs), which were delineated based on migration patterns, commuting flows, and transport accessibility. The obtained results point to increasing differentiation of peripheral characteristics at the subregional level, emphasizing the importance of this spatial scale for understanding the patterns shaping socio-economic development disparities. The findings highlight the utility of case study approaches and targeted, area-specific development programming for various developmental types of territories. These insights support the design of territorially-oriented development policies aimed at overcoming developmental challenges in the context of contemporary global socio-economic crises, including the repercussions of the pandemic crisis.



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POLISH-INDIAN RELATIONS IN WARSAW'S FORMS OF COMMEMORATION

Despite the great distance separating India and Poland, these two countries have more in common than one might expect. The relationship dates back to the first visits of Poles to the Indian subcontinent, continuing through the events of World War II and the beginning of diplomatic relations in 1954. In the following project we present an analysis of Warsaw's urban space features and urbanonyms that commemorated individuals or events related to India. A mapping of those sites was conducted and visualized on the city map. Each element was characterized based on 4 research questions: (1) In which year did it appear in the urban space? (2) What or who is commemorated on it? (3) If it contains text, in which language is it written? (4) What is its current condition? Is it being maintained properly by the authorities? Next, a subjective assessment of each object's surroundings was conducted to determine the status and character of the neighboring elements of the urban space. Finally, the study examined which of the researched locations had been visited by Indian diplomats during official visits. The results of the study showed that the capital's forms of commemoration are most often associated with Maharaja Digvijaysinhji, the ruler of Jamnagar, located in today's Gujarat state, whose principality became a refuge for Poles during World War II. Even though today India is not Poland's main political partner, historical ties between these two countries deserve attention and should be the subject of future scientific research.



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MOVING BEYOND PERMANENT RESIDENCE: MULTILOCAL LIVING OF THE INHABITANTS OF THE MAZOVIAN VOIVODESHIP, POLAND

The presentation discusses the understudied in Central and Eastern Europe topic of multi-local living. Multi-local living is understood as a practice of residing in two or more places and anchoring in multiple locations while frequently relocating between them. The concept of multilocality is a complementary approach to go beyond the limitations of analyses of spatial behavior based on one permanent (registered or declared) residence. The historical past, the persistent shortage of housing, the attachment to ownership and the persistent belief that there is a lack of financial resources to maintain more housing, as well as low residential mobility, have resulted in the prevailing conviction that this phenomenon is marginal in Poland. According to exploratory research on 'Residential multilocality in Poland and its importance for a sustainable spatial management' funded by the Polish National Science Center (NCN:2021/43/D/HS4/00153), the aforementioned circumstances do not conflict with the growth of multi-local practices. The phenomenon is observable, although it manifests differently than in Western European nations.

The presentation, based on Computer-Assisted Web Interviews (n=996) conducted in 2023, will go over the specifics of the motives, spatial and temporal practices (co-use of homes), and local (non)involvement of Polish multilocal residents. The chosen practices have been influenced by both internal (gender, life stage, social status, etc.) and external factors (uneven access to labour resources, housing availability, etc.). In line with the above, we will describe how residential arrangements under the influence of mobility develop other or similar characteristics to Western European, especially in the socio-economic and spatial dimensions.



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THE CONTESTING PAST AS A GEOPOLITICAL DISCOURSE TOOL – POLITICAL SYMBOLISM AND COLLECTIVE MEMORY ACROSS CENTRAL AND EASTERN EUROPE

The turbulent political developments of the 20th century left countless physical monuments to wars, revolutions, and political regimes in Europe. They are silent reminders of often tragic events, but also times of hope. The real significance of these artifacts lies in their power to emotionally affect individuals and the entire society decades after the events themselves. Through the process of memorialization, they become part of collective memories and the discursive formation of political identities. This article will attempt to discuss cases of geopolitical contestation in selected locations in Central and Eastern Europe – in Latvia, the Polish-Ukrainian borderlands, Moldova, and the Republic of Serbian Krajina; that is, places where the past is still more than alive.



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CROSS-BORDER TOWN-TWINNING - A MEANS OF DISCOVERY AND INTEGRATION

Town-twinning has established itself as an integral part of European integration at local level. It is not only about cooperation between the local authorities concerned; this element of regional development also includes activities in the fields of education, culture, tourism and individual contacts between active residents. The aim of the paper is to provide information on the development of town-twinning from the Czech/Moravian side of the Interreg Slovakia-Czechia 2021-2027 programme area, i.e. the regions of South Moravia, Zlín and Moravia-Silesia. In addition to the emphasis on Czech-Slovak cooperation, cooperation with Austria and Poland will also be reflected. We draw on the previous findings of the relevant institutions - the project partners, the Association of Towns and Municipalities of the Czech Republic (SMOCR) and the Association of Towns and Municipalities of Slovakia (ZMOS), in particular the current research of Masaryk University and Comenius University in Bratislava. The following ten points are generally emphasised for successful cooperation: define expectations and benefits, establish the prerequisites and requirements for securing the partnership, careful selection of the partner, evaluation and determination of the future direction of the cooperation, political support, involvement of a broad spectrum of entities operating in the city, active public involvement, securing financial resources, staff capacity, volunteering and passion for the cause. In addition to a relatively independent, but of course coordinated desk-research, we carried out an extensive questionnaire survey of local governments or micro-regional associations. Here we present the first results, which will be followed by field research in selected localities. Thus, we aim to cover not only quantitative but also qualitative aspects as well as the causality of the observed process with the possibility of generalizing the findings.



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THE CONCEPT OF POST-SUBURBIUM AND ITS APPLICATION IN THE STUDY OF METROPOLITAN AREAS IN POLAND

The continuous development of suburban areas has been an integral part of global urbanization processes for several decades. However, the perception of suburbs in terms of functionality, politics and society is gradually changing. In countries with a longer history of suburbanization, attention is increasingly paid not only to the quantitative dimension of this process, but also to the significant qualitative change that takes place in the suburbs. The main emphasis in the paper was placed on new trends in the development of suburban zones, referred to as the common concept of post-suburbanization. The analysis includes the characteristics of traditional suburbs as "products" of the city and post-suburbs as „products” of globalization. The paper ends with a presentation of important research issues related to the implementation of the concept of post-suburbs in the countries of Central and Eastern Europe, particular in metropolitan areas in Poland.



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DEMOGRAPHIC PICTURE OF RESIDENTS OF SUBURBAN ZONES OF LARGE POLISH CITIES

The process of depopulation of Poland has been progressing for a dozen or so years. This is primarily due to the negative natural increase, which has been compounded for many years by the negative balance of international migration. An exception on the map of demographic changes are the suburban areas of large cities, which have recorded exceptionally high rates of population growth. They owe this to the large scale of residential migration, and as a result, they are currently areas with the greatest potential for demographic development. The paper identifies elements of this potential, characterizing the demographic structure of residents of the suburbs of the 6 largest cities in Poland. The detailed characteristics concern the suburban area of Poznan, for which residential hyper-suburbanization poses challenges for local policies, primarily in the area of access to social services



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CO-INTELLIGENCE: PROMISES AND CHALLENGES OF INCORPORATING ARTIFICIAL INTELLIGENCE INTO MAP DESIGN

The design of a small-scale map requires the abstraction of spatial data to adapt it to the intended purpose, level of detail, and user needs. This decision-making process is known as cartographic generalization. The first step in cartographic generalization is selection, related to deciding which objects to retain or omit while generalizing a map to a smaller scale. Effective selection is essential for maintaining map legibility and comprehensibility. With the increasing demand for efficient map production, automation of selection has become a necessity. Researchers have explored various artificial intelligence (AI) methods to automate cartographic generalization, including expert systems, multi-agent systems, and machine learning (ML). In recent years, AI-generated content (AIGC), encompassing text, code, images, and maps, has opened new possibilities for automated map design. However, the accuracy and reliability of AI- and ML-assisted map design have not yet been thoroughly evaluated.

This talk will examine both the opportunities and challenges of integrating AI into map design, demonstrated through practical small-scale mapping experiments. Examples focus on the automatic selection of settlements, road networks, and river networks from a source database to target, smaller-scales. The AI-driven selection algorithms include both traditional machine learning methods, such as decision trees and random forests, as well as deep learning models based on backpropagation neural networks.

The results indicate that AI-supported automatic selection produces promising outcomes, closely resembling expertly designed paper maps. This suggests that the synergy between human expertise and machine learning can yield optimal results. However, it is also crucial to recognize the limitations of AI, including potential biases introduced by the algorithms, which may impact the accuracy of automated map design.



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TSARA FIAINANA – A GOOD LIFE. SUBJECTIVE WELL-BEING IN THE RURAL ZONES OF MADAGASCAR

While the research on happiness is prominent in high- and middle-income countries, the least developed countries' (LDCs) context has been awarded less attention. The objective of this qualitative study is to provide insight into how Malagasy living in the most destitute regions perceive happiness (affect and culture variables especially) and how ecosystem services impact their subjective well-being. The latter will be described using the concept of Nature Contributions to People (NCP).

Using a literature review format, the author presents the summary of the subjective well-being in the LDCs and shares the results from interviews conducted in the rural communities located in the three southernmost regions of Madagascar (called the Grand-Sud) in 2022–2024. Besides the interviews, the traditional speeches from community leaders (i.e. kabary) were recorded and analyzed and serve as an innovative source of information.

One thing that transpires from the study is the role the community plays in the assessment of past happiness whereas for future happiness the main focus is on the education or career goals. The importance of ecosystem services for subjective well-being is recurrently emphasized which underscores the need to value the NCP in policymaking in the LDCs.



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CAN MICROCREDENTIAL COURSES MAKE GEOGRAPHY MATTER MORE BEYOND ACADEMIA? THE CASE OF GEOINFORMATICS FOR ENVIRONMENTAL SUSTAINABILITY

Microcredentials offer a flexible and targeted approach to upskilling professionals in specialized fields. In disciplines like geography and geoinformatics, where technological advancements and applied research are rapidly evolving, these short, accredited learning modules provide an opportunity to acquire and certify specific competencies without committing to full-degree programs. They enable learners to stay current with new tools, methodologies, and data-driven approaches.

At the Map and Data Centre of the Institute of Geography, Faculty of Science, Charles University, we have developed two microcredential programs that apply geospatial methods to contemporary issues. Our first course Spatial Data Analyst is designed primarily for professionals, focusing on the processing and analysis of urban geographic data in GIS. In contrast, Geoinformatics for Environmental Sustainability is tailored for geography teachers, equipping them with the knowledge and tools to teach sustainability topics through geographic concepts and geospatial technologies. The course covers key topics such as climate change, environmental protection, sustainable urban planning, or resource management. The practical part of the course includes basic GIS, field research tools, and hands-on assignments designed for classroom use. Participants work principally with open-source programs, ensuring accessibility and adaptability in diverse teaching environments.

This paper discusses the role of microcredential courses in expanding geography education beyond traditional academic structures. Using our courses as examples, we reflect on their potential to support skill development in applied geography, geoinformatics and sustainability-related topics, as well as in geography education itself.



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USING EXAMPLES OF GOOD PRACTICE IN THE REGENERATION OF BROWNFIELDS IN THE CZECH REPUBLIC

The paper deals with the ways in which the know-how arising from examples of good practice of already regenerated brownfields has been used so far in the revitalization of areas with the presence of unregenerated brownfields. The analysis of existing approaches and experiences shows that examples of good practice are presented in many ways (e.g. in the form of internet videos, brochures, exhibitions, media reports or expert studies dedicated to specific sites), but a coherent system has not yet been created that would allow potential end-users (stakeholders) from the decision-making sphere easy and clear access to the necessary information. The paper therefore concludes by suggesting specific measures that can contribute to improving the transfer of the necessary information and knowledge in the future. These include, for example, the creation of an online database of best practice examples (examples of good practice of already regenerated brownfields), which will allow the end-users to make a simple selection of regenerated sites (prioritizing them, for example, by filtering) according to certain criteria (e.g. size of the municipality, original use, architectural design - conversion of original buildings or demolition of original structures).

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TRANS-CARPATHIAN MIGRATIONS OF CRAFTSMEN FROM THE KINGDOM OF HUNGARY TO THE CITIES OF SOUTHERN POLAND IN THE EARLY MODERN PERIOD

Historical records of municipal citizenship admissions constitute one of the most important sources for analyzing migration processes in periods when systematic population statistics were not yet maintained. These records contain valuable information about individuals who obtained urban citizenship—applicants listed in the register had to declare their social status, place of origin, and profession. This allows for a detailed examination of the social structures of migrant groups settling in cities and integrating into their economic and social life. In the cities of southern Poland where municipal citizenship records have been preserved—such as Kraków, Tarnów, Bochnia, Pilzno, Biecz, Przemyśl, Przeworsk, and Lviv—many newcomers can be identified as originating from various regions of the Kingdom of Hungary, including present-day Slovakia and Hungary. Craftsmen from these areas played a crucial role in the development of local communities, bringing with them new techniques, expertise, and trade connections, which contributed to the growth of urban economic structures. My aim is to answer the question of which professions these migrants practiced and from which specific regions the craftsmen who integrated into the social structures of Polish cities in the early modern period originated. Exploring these issues will provide a better understanding of the dynamics of trans-Carpathian migration, the social connections between different regions, and the impact of migrants on the economic development of cities in that era.



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THE SIGNIFICANCE OF GENIUS LOCI IN SHAPING THE TERRITORIAL CAPITAL OF A SMALL TOWN. CASE STUDY OF SZYDLÓW

Nowadays, development policy uses an approach called territorialization of development. It means basing development processes on endogenous resources while using the values and social and economic relations established in a given area. This involves making two assumptions. Firstly, it is assumed that each territorial unit has its own economic, social, cultural and institutional specificity, which, shaping spontaneously and/or through deliberate intervention in development factors, creates its territorial capital. Secondly, the effective use of this capital requires knowledge and skills in the application of development policies. The starting point of the work is the assumption that the territorial capital of an individual is, to a large extent, a derivative of the local genius loci (the spirit of the place). Nowadays, genius loci is usually simply the uniqueness and uniqueness of a place that its inhabitants can be proud of and which can be sold as a tourist product, which stimulates the development process of a given entity. The important features that determine the creation of genius loci include: the location and beauty of the landscape, rich history, architectural monuments, specific creativity. The main aim of the work is to identify the genius loci and discuss its importance in shaping the territorial capital of a small town. The spatial scope of the analysis refers to the level of the small town of Szydłów located in the Świętokrzyskie Voivodeship. In 2019, Szydłów, with less than 1,000 inhabitants, regained the status of a city after 150 years, which creates new development opportunities.



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REGIONAL DIFFERENTIATION OF POPULATION HEALTH IN THE CONTEXT OF PERIPHERALITY: DO (PHANTOM) BOUNDARIES MATTER?

Spatial inequalities in population health are shaped by a set of factors and mechanisms driving either convergence or divergence. In this context, the regional differentiation of population health is understood as an outcome of differential regional vulnerability affected by variations in demographic, social or economic population structure. These structural variations are also manifested in several aspects of people's behaviour which can simultaneously shape and transform them. In this contribution we evaluate the relationship of health-risk behavior with different types of boundaries in Czechia associated with long-term peripheralization processes. The first type refers to outer peripheries located in the border regions along the state border. The displacement of Czech Germans after 1945 and the subsequent resettlement is considered a turning point, which interrupted the cultural and social continuity of the Sudetenland region and fundamentally transformed the population structures there. The second type refers to inner peripheries at the interface of NUT3 regions, which represent a completely different type of border, still anchored in the administrative division of Czechia. An extensive spatial quantitative analysis is carried out to assess the level and dynamics of health outcomes along the types of boundaries under study. Population health is measured by innovative indicators based on years of life lost, all-cause age-standardized mortality rate and also according to different causes of death related to premature mortality. Given the potential negative impacts related to the growing geographical polarisation of society, it is timely, important and socially relevant research.



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ON THE TWO TRAPS IN WHICH SLOVAKIA “UNEXPECTEDLY” FOUND ITSELF

The middle-income trap essentially reflects the situation in which Slovakia is experiencing economic stagnation, and most of the factors that could help the country escape this trap are currently in significant decline. Escaping this trap will therefore not only be difficult but will also require a long-term process. To briefly explain: Slovakia's national economy has become stuck in the second stage of development (“efficiency-driven economy”), and a series of governmental failures have prevented it from transitioning to the third stage (“innovation-driven economy”).

The trap affecting the lives of the Roma population in Slovakia is clearly evident. A significant portion of the Roma population lives at the threshold of absolute poverty. This situation is characterized by low educational attainment, unemployment, poor health, inadequate housing, social exclusion, feelings of discrimination, hidden racism, and other negative phenomena. Despite the state's long-term efforts—starting as early as 1761, when Empress Maria Theresa issued the first decree aimed at improving their living conditions—there has been little success in improving their situation in Slovakia. Given their current estimated population of approximately half a million, the Roma represent a serious social issue in the country.



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MURALS AS LOCAL ART ON THE EXAMPLE OF POLISH CITIES

Mural art is an element of urban space widely represented in cities (although not only) throughout the world. However, while its occurrence is a global trend, it is at the same time a remarkably local phenomenon. Primarily because of the subject matter, which very frequently reflects local history and heritage, secondly, because of the participation of local artists who clearly understand the character of the place. Another aspect is funding – murals are financed entirely or with the partial support of local authorities (including participatory budgeting), local entrepreneurs, NGOs or community fundraising. Finally, in many cases the community may be directly involved at the conception and creation stage of the murals, but also in their further promotion and preservation. This variety of aspects of the local character of mural art will be presented on examples from selected cities in Poland.



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CARTOGRAPHIC PRESENTATIONS OF THE BATTLEFIELDS: THE PROBLEM OF TERRAIN, WARFARE, AND TIME

The representation of military operations on maps has a long history. Initially, maps and plans of battlefields were more like paintings and panoramic views. Only the development of military topography and the increasing number of battle descriptions (e.g. not only personal, but official, battle diaries) made that in the 18th-19th centuries cartographic presentation of warfare began to resemble current military maps and plans.

The aim of the paper is to show changes in the forms of cartographic presentation of military activities. The main topic of the paper is the problem of simultaneously presenting on the maps the specific of the terrain of a battlefield and the changes in military situation. Much attention in the paper was devoted to the issue of Bertin's visual variables used in such maps. The paper discussed traditional analogue maps (tangible maps), as well as digital maps (including animated maps).



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TERRITORIAL CAPITAL AS A FOUNDATION FOR THE ENDOGENOUS DEVELOPMENT OF THE BAGEL- SHAPED SYSTEMS OF SMALL TOWNS: A CASE STUDY OF THE WIELKOPOLSKIE VOIVODESHIP

The main objective of this paper is to determine the significance of territorial capital as a foundation for endogenous development in the context of the bagel-shaped systems of small towns, which are characteristic of Poland. The study focuses on identifying key factors that contribute to the formation of territorial capital and assessing their impact on the developmental processes of these systems, considering the specific characteristics of their constituent units. The spatial scope of the study includes selected urban municipalities (towns with a population of up to 20,000 inhabitants) and their rural counterparts (bagel municipalities) located in one of Poland's regions – the Wielkopolskie Voivodeship. The temporal scope covers both a static perspective (the year 2022) and a dynamic analysis (the period 2012–2022). The research process aimed at achieving the study's main objective consists of five stages. In the first stage, a literature review was conducted, analyzing the concept of territorial capital, its components, and the specific territorial structures – bagel-shaped systems of towns of a certain size. In the second stage, research methods and data sources were selected to analyze the chosen topic. The third stage presents the characteristics of the study area, encompassing the bagel-shaped systems of small towns in the Wielkopolskie Voivodeship. The fourth and main stage of the study presents the research findings, revealing the diversity of factors as well as the level and dynamics of territorial capital development within the analyzed systems. In the fifth and final stage, a discussion was conducted, and conclusions were formulated, indicating that territorial capital plays a crucial role as a foundation for endogenous development in the context of the bagel-shaped systems of small towns in the Wielkopolskie Voivodeship. Significant differences in the level and dynamics of territorial capital development were observed among the examined systems. Individual factors have a varying impact on development, and their effectiveness depends on the specific characteristics of a given system.



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SPATIAL PATTERNS OF TRAVEL BEHAVIOUR IN CZECHIA: CONTINUITY OR CHANGE?

Travel behavior is an inherently complex field that examines the movement of people in space, with a particular focus on the choice of transport modes and other aspects of individual mobility. Since the 1990s, the Czech Republic has experienced significant shifts in spatial mobility patterns and travel behavior. This paper analyzes the spatial patterns of travel behavior between 2011 and 2021, drawing on data from the last two population censuses. The study explores the use of different transport modes for commuting, highlighting key trends and regional variations. The findings reveal specific spatial patterns in transport mode preferences and provide a synthetic assessment of the main changes in car and public transport usage. The typology of municipalities based on transport behavior confirms the continuation of previous trends—such as the increasing dominance of car travel—while also identifying notable shifts in travel behavior across different types of areas in Czechia.



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BETWEEN URBAN AND RURAL: A CAR OWNERSHIP PERSPECTIVE ON SUBURBANIZATION IN POLAND

Not only did the systemic transformation in Poland and other CEE countries change the political and economic systems, but it also significantly rearranged urban spaces. Under the communist regime, the new urban areas were predominantly developed within the existing urban fabric, which restricted the growth of suburban settlements. Departure from central planning and unleashing of the market forces significantly changed this situation. Under such circumstances, Polish families started to move from the city centers to the newly developed residential areas in the suburbs. This development was, however, essentially chaotic and uncontrolled and not followed by the provision of public transport and other indispensable services. As a consequence inhabitants of the suburbs became strongly dependent on individual mobility which is reflected in high levels of car ownership. Although these levels were very similar in cities and their neighborhoods twenty years ago, the car ownership level in the suburbs is noticeably higher than in large cities (and similar to the rural areas). In this study, we aim to reveal determinants of high car ownership levels in the suburbs of Polish cities and confront these determinants with factors driving this phenomenon in cities and rural areas. Employing the econometric modeling and data concerning more than 15 million cars registered in 1964 investigated spatial units, we empirically test the influence of such factors as income, population density, housing type, availability of public transport, and work and school-related daily migrations. Our findings show that despite close proximity and functional connectedness with the core urban areas, the investigated suburbs are more similar to the rural areas from the perspective of mobility and car ownership.



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**ONE LANDSCAPE, MULTIPLE VALUES. CULTURAL
ECOSYSTEM SERVICES FOR BETTER TOURISM
MANAGEMENT ON THE PERIPHERY**

The presentation discusses the applicability of the cultural ecosystem services approach to sustainable tourism management in peripheral areas. On the example of studies realized in the last ten years at the edges of the tourist ecumene in Poland, Niger and Colombia, the importance of value transfer between guests and hosts will be discussed. Tourism on the periphery is approached as a complex socio-ecological system. The interrelationships between its elements are the key to ensure resilience and flexibility which is necessary to face changing global and regional conditions.



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SPATIAL AND SOCIO-CULTURAL ASPECTS OF FOREIGN LANGUAGE INFORMATION SYSTEM IN DIVIDED BORDER TOWNS

Consumer behavior leads to flows of circular migration that affect the spatial changes of divided towns in various dimensions. One of them is the town's bilingual information system (in the native language and, more importantly, in the language of the neighbor), which facilitates contacts and strengthens ties between the different communities living so close to each other. The bilingual nature of the information system in divided towns ensures greater effectiveness of information delivery, thus promoting and facilitating the achievement of desired goals (Matykowski et al. 2017). The presentation aims to briefly characterize the forms of presentation as well as the distribution and intensity of foreign language information in divided towns in the Polish-German and Polish-Czech border areas (Ślubice-Frankfurt an der Oder, Gubin-Guben, Zgorzelec-Goerlitz, and Cieszyn-Ceský Tešín), with a particular focus on commercial and service content as well as their evaluation by the towns' users. The author assumed that the foreign language information environment influences the behavior of cross-border consumers in that they choose those stores whose signs or advertisements are equipped with information in their native language. Moreover, it was found that the greatest intensity of this information coverage is related to the area of consumer penetration, i.e. the places best equipped with commercial stores – usually the town center or main streets near the border. The author would also like to draw attention to the issue of protecting the townscape from being polluted by an excessive number of advertisements.



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ANALYSIS OF THE IMPACT OF THE ROAD NETWORK ON THE TRANSPORT ACCESSIBILITY OF SLOVAKIA IN THE PAST (1970 – 2020) WITH MODELLING FOR THE FUTURE

The main objective of the paper is to analyze the transport accessibility of Slovakia by individual car transport in the period 1970 – 2020 and to evaluate the future development separately, with regard to the selection of one of the 2 variants of the solution of the north-south road transport connection. The basic input for all transport accessibility indicators is the time distance obtained by distance analyses from the author's network datasets for each selected time section and future variant. Individual methods of analysis are divided into 4 groups in the paper. The 1st group consists of analyses expressed using the isochronous method such as the time accessibility of regional cities from the entire territory of Slovakia, the accessibility of regional cities from municipalities of the respective regions and the accessibility of district cities from the respective districts. These indicators express accessibility in a simple and clearly interpretable way. The 2nd group consists of an indicator of summary (cumulative) availability, which also works with time accessibility, but does not have a predetermined centre/destination against which accessibility is determined. The 3rd group consists of indicators of interaction potential, or population potential of municipalities. This, in addition to removing a predetermined center, also removes a fixed time limit and takes into account the influence of absolutely all settlements (municipalities). All 3 groups of analyses show in particular the significant impact of the construction of motorways and other important transport sections in the last 50 years. The 4th group of indicators evaluates one of the two future variants of the north-south motorway connection in Central Slovakia. Their impact on road accessibility is analysed from the perspective of the territory of Slovakia and the wider hinterland of neighbouring countries. The results were processed into map applications in the ArcGIS Hub environment, where they are presented in an accessible form to the general public.



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IMMOBILITY AMONG SYRIAN REFUGEES IN LEBANON

This research examines the immobility of Syrian refugees in Lebanon, focusing on the structural and psychosocial factors that influence their decision to stay. While much of the discourse on displacement emphasizes the forces driving displacement, this study highlights the often-overlooked agency of refugees, arguing that their decisions are not merely direct outcomes of external constraints but complex, active responses to shifting obstacles and opportunities. Drawing on 35 qualitative interviews—20 conducted in 2022 and 15 in 2025 in Beirut—the study explores how repressive policies, economic and legal insecurities, and changing return prospects shape (im)mobility aspirations and perceived capabilities. These findings aim to contribute to discussions on protracted displacement, refugee governance, and the lived experiences of immobility in crisis settings.



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EXCLUDED IN 'INCLUSIVE' SOCIETIES? CHALLENGES TO THE CIVIC INTEGRATION OF NATIONAL MINORITIES IN GEORGIA AND UKRAINE

The issue of the (non-)integration of national minorities has been exploited and instrumentalized in several recent conflicts in Eastern Europe and the Caucasus. However, both academic and political debates have mostly focused on the interests of states, thus neglecting the unique perspectives and heterogeneous geographies of national minorities. Against this background, this paper examines the possibilities and limits of national minority integration in three minority regions of two ethnically heterogeneous countries aspiring to EU membership - Georgia and Ukraine. Both countries are promoting civic minority integration policies while facing several political and territorial challenges. The focus is on regions with some tensions short of hot conflict - Armenian-speaking Javakheti, Azerbaijani-speaking Borchalo and Hungarian-speaking Transcarpathia. Between June 2022 and November 2024, I conducted three research visits to Georgia and four to Ukraine, during which I conducted 40 in-depth semi-structured interviews with community representatives, civil society activists and NGO workers in the respective regions, as well as with Georgian and Ukrainian experts. Field observations of the symbolic political landscape in the regions complemented the data. The findings suggest that Georgian and Ukrainian efforts to integrate national minorities, while formally institutionalized, are inadequate. This is due to persistent constraints imposed by both state institutions and majority perceptions. On the minority side, profound differences in the willingness to integrate were found both between and within cases. The findings have implications for the classical unidimensional concept of civic-ethnic nationalism and national belonging, which I therefore propose to reconceptualize.



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DISAPPEARED SUGAR LANDSCAPE OF PILSEN REGION

Europe and the Czech lands were at the forefront of beet sugar production for almost 200 years. The introduction of sugar beet cultivation meant fundamental land use changes in the river floodplains and in their immediate flat surroundings here. During the 19th and 20th centuries, the production of sugar from sugar beet was one of the most important branches of Czech industry. Of the more than 380 sugar mills, only six (seven) are still in operation today. The current post-industrial era bears traces of the gradual decline of this sector, which is exacerbated by the decay of disused industrial sites converted into brownfields. The paper attempts to present the historical and geographic aspects of the sugar industry tradition with its impact on the cultural landscape of the Pilsen region. The area has prerequisites for sugar beet cultivation, however, the change of land use has led to a complete decline of the sugar beet tradition in the region. The transformation of the immediate surrounding landscape is documented in the original sugar mills in Plzeň, Křimice, Prádlo, Lužany and Měčín.



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MEMORYSCAPES OF TRAGIC EVENTS IN CENTRAL EUROPE

In today's central Europe states of Czechia, Poland and Slovakia a lot of tragic events took place – from the medieval to modern era battles, but also plenty of other events dated to the 20th century as part of World Wars or the Cold War era. Many of them are part of national history and become memorials and/or museums and through the politics of space can strengthen or weaken the narratives that are shaping those countries and their identities.

This paper aims to focus on the memorials/museums referring to the period of the 2nd World War, when the concentration camps (and in case of Poland even extermination camps) were created. Today they serve as a reminder of the tragic past and we can study them not just from the viewpoint of tourism geographies, but we can see them also as a memoryscapes. Those can be defined as assemblages of memory-objects, practices and imaginaries that constitutes memory space-times, and they can produce not only worlds of public remembrance but also of forgetting. Through the analysis of documents and media describing 2nd World War and holocaust memorials (of Czechia, Poland and Slovakia), their formation and history will be explained how those processes of memorialisation differ or in particular examples of museums and/or memorials from each country.



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UTILIZING LANDSAT DATA AND CROWDMAPPING TO ASSESS THERMAL CONDITIONS AS PART OF URBAN CLIMATE ADAPTATION PLANS IN POLAND

The impact of climate change is undeniable and is profoundly affecting various aspects of human life. As awareness of the climate crisis intensifies, it is clear that the repercussions are not only due to the direct consequences of climate change but also stem from how climate policy influences the economy and household finances. Adapting to these changes and seeking socially acceptable solutions is imperative.

In response to this urgent need, Poland has adopted amendments to the Environmental Protection Law at the end of 2024. These amendments mandate that cities with populations of 20,000 or more implement adaptation measures based on urban climate change adaptation plans (UAPs). While the law specifies the necessary components for these plans, it lacks clear methodological guidelines for their preparation. Furthermore, the Guide for Developing Urban Adaptation Plans published by the Institute of Environmental Protection – National Research Institute in 2015 and updated in 2023 provide valuable framework but not sufficiently detailed methodologies.

To fill this gap, we present robust procedures that allow for effective assessment of urban thermal conditions as part of UAPs. We propose a dual approach that leverages thermal infrared data from Landsat satellites while actively engaging civil society in mapping the effects of climate change, with a particular focus on the public's perception of heat through a crowdmapping technique. This presentation will showcase the outcomes of our efforts in developing the urban adaptation plan for Chojnice, a city of 40,000 residents located in the Pomeranian Lakeland in northern Poland.



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THE IMPACT OF COVID-19 ON LABOR MARKETS IN CENTRAL EUROPE: EVIDENCE FROM POLAND, CZECHIA, AND SLOVAKIA

The COVID-19 pandemic significantly impacted labor markets across European countries, with its effects unevenly distributed among socioeconomic groups and regions. This study analyzes the economic consequences of pandemic-related measures in Poland, Czechia, and Slovakia using data from the 10th round of the European Social Survey. The findings indicate a substantial increase in labor market inequalities in all three countries, with the most common effects being income reduction, reduced working hours, and forced unpaid leave.

In Czechia, the situation was particularly severe, with 39.1% of employed individuals experiencing at least one negative labor market event—one of the highest rates in Europe. The most affected groups were those with secondary education and employees in the private sector. In Poland, 32.2% of the working population was impacted, with self-employed individuals and service sector employees being the most vulnerable. In Slovakia, 36% of workers experienced adverse effects, with working hour reductions and income losses playing a crucial role.

The analysis also confirms significant gender differences—women were more likely to experience income reduction and forced unpaid leave, whereas men were more exposed to job losses. The findings highlight the need for improved active labor market policies and targeted support for vulnerable groups.



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LAND-USE CHANGE AND THE RECYCLING OF URBAN SPACES

Modern cities are developing at an exceptionally dynamic pace, creating both opportunities and challenges for sustainable urban planning. The accelerating process of urbanization and climate change necessitates the rational management of space—a resource whose limitations are becoming increasingly evident. One of the key issues is uncontrolled urban sprawl, which leads to inefficient land use, environmental degradation, and higher infrastructure costs.

The spontaneous growth of residential investments largely dictates urban land use trends, often without considering long-term consequences. Therefore, it is essential to implement methods that assess spatial development changes and their impact on the further growth of cities.

The aim of this presentation is to introduce methodologies for spatial analysis that help better understand urbanization mechanisms and evaluate the effectiveness of different land management strategies.



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BIOSENSORS IN THE STUDY OF PUBLIC SPACE – TOWARDS INNOVATIVE URBAN AND SOCIAL GEOGRAPHY

Public spaces and the comfort of their users are increasingly becoming the focus of geographical research. In the study of emotions associated with being in a specific space, an objective approach is necessary alongside the subjective one, which is based on describing the feelings evoked by the environment. Geography, responding to the need for innovative research methods and tools, suggests using ambulatory sensors to measure the body's reaction to external stimuli.

This paper aims, on one hand, to propose guidelines for the methodology of using electrodermal activity (EDA) sensors in public space research, and on the other hand, to highlight the practical application of this type of research. The paper presents the results of a study in which students used biosensors to examine public space, specifically Krakowskie Przedmiescie Street in Warsaw. The study confirmed that the outcomes of biosensor measurements do not primarily establish an objectively identified cause-and-effect relationship between a stimulus and a specific body's reaction. Instead, they offer an in-depth reflection on how we experience space.

Due to the multitude of stimuli from the environment, as well as the emotional and mental state of each individual, biosensors are currently more suitable for static research in microspaces. However, geographers should continue conducting rigorous research to determine whether and how these devices should be used in field studies, how to standardize the conditions under which recordings are made, and how to standardize both measurement methodology and participant selection.



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WHO WILL BENEFIT FROM HIGH-SPEED LINES? CHANGES IN ACCESSIBILITY IN CZECHIA AFTER THE CONSTRUCTION OF HIGH-SPEED RAILWAYS

High-speed railways (HSR) are carriers of a leap in time accessibility, bringing places and regions equipped with HSR terminals closer together physically and psychologically. However, like motorways, they can increase the spatial polarisation, as regions without access become relatively less accessible. Changes in the quality of accessibility in the context of the Czech HSR plan are the focus of this paper, which presents the results of the GIS transport model.



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SOCIO-GEOGRAPHICAL REGIONALIZATION OF THE CZECHIA 2021: HOW CITY OF JIHLAVA BECAME A MESO-REGIONAL CENTRE

Sociogeographic regionalisation is a recurrent research topic. The contribution presents the main results of sociogeographic regionalisation of the Czechia according to the methodology of prof. M. Hampl based on the latest data from the 2021 census. Firstly, we deal with comparison of current delimitation and their comparison with the older state, and secondly, we assess the main changes in their hierarchy or differentiation. The most surprising result of the study is the establishment of Jihlava as a new mesoregional centre. This fact indicates that the main dynamics of regional differentiation is shifting to a higher regional level.



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SOCIAL PARTICIPATION IN URBAN REGENERATION PROCESSES

Urban regeneration should be a process based on social participation, on broad cooperation with various stakeholders, and on the creation of lasting local partnerships. The application of the participatory formula allows for a continuous exchange of information and knowledge, decentralisation of the decision-making process and dialogue between different institutions involved in activities in degraded areas. It supports relationship building, social integration and the strengthening of trust between stakeholders. One of the obligatory participation tools in revitalisation in Poland is the so-called Revitalisation Committee, consisting of representatives of different stakeholders. It has an advisory and consultative function for local authorities. The paper will present the Polish view of social participation in revitalisation, which stems both from current legislation, the experiences of local authorities and from questionnaire studies and in-depth interviews with members of revitalisation committees conducted by the authors. This is because the obvious postulate about the need to stimulate social participation in revitalisation at every stage is, however, often not easy to realise in practice.



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GREEN TRANSFORMATION OF COAL REGIONS THROUGH ECO-INNOVATIONS: THE CASE OF WIELKOPOLSKA WSCHODNIA

The green transformation and technological development are among the factors driving actions aimed at reducing the risks associated with global warming, biodiversity loss, and environmental pollution. However, the new energy paradigm, based on innovative solutions related to green energy, creates uncertainty about the future development of many old industrial areas, including those in Central and Eastern Europe.

One such example is Wielkopolska Wschodnia (Eastern Greater Poland), a region with an industrial heritage based on fossil fuels. This paper investigates the green transformation process in the region and its effort to escape from lock-in in traditional industries. The process is shaped by the adoption of eco-innovations (EIs) in regional enterprises, particularly in terms of generating environmental benefits during manufacturing (e.g., reduced energy consumption, lower CO₂ footprint, and increased use of renewable energy sources).

The study examines the role of resources, capabilities, public policy, and stakeholder influence in the implementation of EIs in industrial companies within the region. This research aims to identify the key characteristics of an old industrial region's escape from lock-in, using the green transformation in Wielkopolska Wschodnia as a case study.



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INTERNATIONAL TRANSPORT OF WILD ANIMALS BETWEEN ZOOS AS AN ELEMENT OF SPECIES BIODIVERSITY PROTECTION. CASE STUDY OF SELECTED POLISH ZOOS

The basic function of modern zoos, associated with international nature conservation organizations, is to save endangered species of wild animals and provide them with appropriate living conditions. They contribute to maintaining or increasing a healthy population of animals threatened with extinction in captivity. The ZOO Wrocław and the Łódź ZOO Orientarium in Poland, as a part of the European Association of Zoos and Aquariums (EAZA), implement the mission of modern zoos by participating in the international transport of endangered animal species (Piasecka 2023).

The aim of this paper is to explain how the international transport of wild animals between zoos associated with EAZA contributes to the preservation of animal species biodiversity. The analysed case studies are the Wrocław and Łódź zoos, which are also among the largest in Poland in terms of the number of animals, their species and among the most modern institutions dealing with breeding and protection of animals threatened with extinction in Europe.

The presentation will determine the main reasons and legal conditions for the transport of wild animals between zoos. The required transport conditions for individual species of wild animals will also be presented.

Then, the topic of changes in the frequency and directions of international transport of wild animals will be discussed, using the example of the ZOO Wrocław and the Łódź ZOO Orientarium. The considerations will concern both the number of animals transported and the network of contacts created together with other zoological institutions.



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SPATIAL POLARIZATION OF OWN INCOMES OF POLISH COMMUNES

Own incomes are considered one of the most important sources of financing for local governments in Poland. Although own incomes have been the subject of numerous analyses, extensive research focusing on their spatial aspect is rarely conducted. This article aims to identify the changes in the spatial diversification and polarisation of gminas (communes') own incomes. Data from the Local Data Bank of Statistics Poland and the National Bank of Poland were used. The study used the global spatial autocorrelation coefficient and the LISA method to identify the process of spatial dependence and to determine the degree of spatial polarisation. The results of the analysis confirmed that an increasing spatial autocorrelation occurred in the studied period, leading to the spatial polarisation of the Polish gminas in terms of their own incomes. Gminas with a high level of own income formed spatial clusters within large urban agglomerations, in regions where natural resources were exploited, along the western border and the coastal belt. The findings show that the area of these clusters was expanding. On the other hand, low-own-income gminas were located in eastern and south-eastern Poland. The analysis has not confirmed that the dynamics of the gross domestic product or the level of inequality in gminas' own income per capita had any effect on the changes in the spatial auto-correlation coefficient, nor, consequently, on the process of spatial polarisation.



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REGIONAL, SOCIO-ECONOMIC, AND HEALTH DETERMINANTS OF PHYSICAL FITNESS IN SCHOOL CHILDREN: INSIGHTS FROM A NATIONAL OLYMPIC FITNESS PROJECT

Childhood obesity presents a critical global health challenge, with significant implications for physical fitness and overall health. This study explores regional differences in physical fitness among Slovak school children, focusing on key predictors such as school infrastructure, socio-economic factors, average life expectancy, and BMI. It aims to provide a comprehensive, gender-specific analysis of systemic and environmental determinants influencing physical fitness outcomes.

Data were collected from the Slovak Olympic and Sports Committee's National Physical Fitness Project (OLOV) during the 2023–2024 academic year, encompassing 42 741 students aged 12 to 16 from all eight regions of Slovakia. Physical fitness was assessed using the EUROFIT test battery. Predictors included regional socio-economic indicators, such as unemployment rates and educational attainment, health determinants like BMI and life expectancy, and school infrastructure variables. Factor analysis reduced multicollinearity, and regression models were developed separately for boys and girls across grades 6–7 and 8–9. BMI emerged as the strongest negative predictor of physical fitness (standardized coefficients: -0.64 for boys and -0.56 for girls in grades 6–7). Average life expectancy positively influenced physical fitness (coefficients up to 0.50 for boys in grades 8–9). Social vulnerability had a pronounced negative impact on girls (coefficients as low as -0.68), while insufficient school infrastructure significantly reduced fitness in older boys (-0.44). The regression models explained 58% to 71% of the variance in physical fitness ($R^2 = 0.58\text{--}0.71$).

This study highlights the multifactorial nature of physical fitness disparities among school children, emphasizing the roles of BMI, socio-economic factors, and school infrastructure. The findings underscore the need for targeted interventions addressing systemic inequalities to improve physical fitness and health equity in school-aged populations.



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URBAN BIKEABILITY: APPROACHES, METHODS, AND THE CASE OF TRNAVA

The transition towards more sustainable modes of transport, including cycling, has become increasingly urgent in response to urban mobility challenges. However, financial and spatial constraints often limit the ability of municipalities to implement comprehensive measures that support bicycle use. In the car-oriented urban environments of Slovakia, cyclists are often forced to navigate spaces dominated by motor vehicles and rely on fragmented road networks lacking adequate infrastructure, resulting in varying levels of safety and comfort. This highlights the growing importance of designing effective and safe interventions, as well as developing methods to assess current conditions for cycling and identify areas for improvement. One of the key concepts used in academic literature in the context of evaluating conditions for cycling is bikeability, which has been interpreted in various ways across studies. This study aims to examine the diverse interpretations of bikeability and the methodological approaches to its assessment in literature. It then introduces a methodology for creating an urban bikeability index in Trnava that combines qualitative and quantitative methods, including literature review, open geospatial data, expert consultations, a user survey, and the use of GIS tools alongside crowdsourced cycling trip data.



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TRIP, EXCURSION OR LESSON? GEOTOURISM IN THE SCHOOL EDUCATION PERSPECTIVE (THE SUBTATRA REGION CASE STUDY)

Geotourism is understood as an alternative form of tourism focused on exploring geosites, which are considered to be unique forms of inanimate nature, valuable for the conservation of geodiversity and significant from the point of view of science, culture and history. Geotourism and its products have therefore always been closely linked to the presentation of scientific knowledge and education. This contribution deals with the assessment of the potential of geosites in the SubTatra region from the point of view of the needs of teaching geography in primary and secondary schools. The study area is defined by the borders of four ethnographic regions surrounding the Tatra Mts. - Orava, Liptov, Spiš and Polish Podhale. The basis of the research was an on-line questionnaire distributed to geography teachers in Slovakia and Poland. The aim was to analyse the general awareness of the respondents about the issue of geosites and their attitude towards outdoor geography teaching, as well as evaluation of 20 selected geosites in terms of their familiarity and suitability for geographic education. The results show the asymmetric influence of national borders. While Slovak respondents were mostly unfamiliar with sites in Poland, Polish respondents found some Slovak sites among the most familiar. The results of the evaluation confirmed the preference for the most attractive tourist sites, which would suggest that teachers place more emphasis on the presentation of geoheritage than on explaining geographical processes in situ.

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DRIVERS OF RETURN PLANS OF UKRAINIAN WAR REFUGEES IN CZECHIA: CHALLENGING COMMON ASSUMPTIONS

This paper examines return plans of forcibly displaced from Ukraine in Czechia drawing on data from two rounds of cross-sectional surveys conducted in 2022 (N = 1,037) and 2023 (N = 350), including a panel subsample (N = 116). Combining the exploratory network analysis and structural equation modelling informed by the theory of planned behaviour, the study makes an effort to embrace the complexity of drivers and incorporate a focus on the mechanisms underlying refugees' decision-making. Findings challenge the assumption that return intentions decline naturally with time and integration. Instead, shifts in perceived control over return drive individual-level changes in return intentions over time, while social norms, particularly perceived family pressures, strongly influence cross-sectional variations. These psychosocial drivers, as well as return plans themselves, are shaped more by attachment to Ukraine (emotional, social, identity-related, and material) than by integration levels or hardships in Czechia. The results show that restrictions on the well-being of refugees in Czechia have a limited impact on their return plans. Our findings support the need for balanced return policies that acknowledge social ties, improve return feasibility, and offer flexible pathways to prevent return from being seen as irreversible.



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**SPATIAL DIFFERENTIATION OF SOCIO-ECONOMIC
DEVELOPMENT LEVEL OF THE AUSTRO-
HUNGARIAN EMPIRE AT THE TURN OF THE 19TH
AND 20TH CENTURIES - REGIONAL AND LOCAL
PERSPECTIVE**

Many contrasts characterised the Austro-Hungarian Empire at the turn of the 19th and 20th centuries. In the multinational monarchy, the goals of not only the Austrians (Germans) and Hungarians clashed but also those of the Czechs, Poles, Slovaks, Ukrainians (Rusyns), Croats, Slovenes, Romanians, and Italians. By the end of the monarchy (1910), less than 25% of the population in the entire Monarchy spoke German; in Bukovina and Dalmatia, more than 50% of the people were illiterate, but in Austria, their share was less than 2%; in Hungary, 50% of GDP came from agriculture, but in Austria, only 20%. In Bohemia and Silesia, more than 40% worked in industry, while in neighbouring Galicia, only 7%. The presentation aims to present the results of research on the regional and local differentiation of social and economic structures of Austria-Hungary in 1890-1910. The analysis uses extensive socio-economic data from censuses conducted in the Empire of Austria and the Kingdom of Hungary. The study includes, among others, data on linguistic and religious differentiation, the level of illiteracy, the economic structure based on employment, and agricultural efficiency. The spatial dimension of these changes in the socio-economic structure of the regions of the Monarchy is compared with estimates of GDP per capita (Schulze 2007). This allows us to observe the relationship between socio-economic development, which undoubtedly occurred then, and economic growth. The research uses classical indicator methods, correlation analysis, spatial autocorrelation, and inequality measures.



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**MOBILITY AS A FACTOR SHAPING THE
GEOGRAPHICAL HORIZONS OF THE PEASANTRY IN
THE MODERN TIMES AND 19TH CENTURY. CASE
STUDIES OF TWO VILLAGES INHABITED BY FOREST
GERMANS**

Interdependent consciousness isolation (vertical) and geographical (horizontal) isolation are considered by ethnographers to be among the basic factors shaping peasant culture in the pre-modern Polish lands (and former peasant culture in general). The geographic dimension of isolation was linked to the peasants' attachment to the territory they inhabited. It resulted from both social conditions, including dependence on the owner of the village (i.e. until the enfranchisement of the peasantry, in the territory of Galicia carried out in the mid-19th century), and cultural conditions, connected with strong neighbourhood and territorial ties, manifested in conservative attitudes and other features of traditional folk culture. However, it is well known that a certain percentage of the peasantry left their home villages - migrating to neighbouring areas nearer or further afield, for work, pilgrimage or war, as well as many other reasons. This took place with varying intensity, at different points in history. Meanwhile, the area inhabited by forest Germans (the Carpathian Foothills) is characterised by a high persistence of rural spatial structures, which is typical for southern Poland, and the family names of the inhabitants of many villages in this area have appeared in archives for several hundred years. It is therefore important to ask about the degree of intensity, distances and directions of mobility of peasants living in this area in the past. Of course, in addition to spatial mobility, the degree of geographical awareness and isolation was also influenced by the degree of development and nature of the educational activities undertaken mainly by the church and the court. The paper is a contribution to the consideration of mobility as a factor shaping the geographical horizon of the peasantry living in the villages of the Forest Germans in the modern era and the 19th century on the example of Olpin (Biecz district) and Haczów (Krosno district). Church records and other historical data on population mobility were used for the analyses.



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**GEOGRAPHY OF GENEALOGICAL MEMORY. A MAP
AS A TOOL FOR REPRESENTING AND INTERPRETING
AN INDIVIDUAL'S KNOWLEDGE OF FAMILY
HISTORY**

Research into the phenomenon of amateur genealogy in contemporary Poland reveals not only the question of understanding the past, but also the perception of space. The process of researching family history from a geographical-cultural perspective is thus a process of expanding the horizons of genealogical memory. The genealogist creates genealogical memory maps in his/her mind. Such complex mental maps consist of more or less emotionally charged places and trajectories of the lives of ancestors and all places that are repositories of traces of family history. During the talk, I will present and discuss examples of genealogical memory maps of contemporary Poles, developed on the basis of ethnographic research as part of the author's project *Between the 'Great History' and small histories. Popular genealogy in present-day Poland*.



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THE BOUNDARIES OF ART AND ADVERTISING: COMMERCIAL MURALS IN WARSAW'S PUBLIC SPACE

In Warsaw's public spaces, large-scale, hand-painted advertisements – commercial murals – are appearing with increasing frequency. These murals are characterized by their dynamic nature, use of modern artistic forms, and concentration in central areas of the city.

Why has this type of advertising become so popular in Warsaw's urban landscape? How does it impact the work of artists creating murals for purely artistic purposes? What are the tendencies in the distribution of the commercial murals?

The author of this presentation seeks to answer these questions using the following research methods: in-depth interviews with mural artists and advertisers; field research involving an inventory of commercial murals and photographic documentation; and analysis of regulations governing advertising in Warsaw's public spaces.



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INTRODUCTION TO PORK BARREL POLITICS: THE SPATIAL DISTRIBUTION OF REGIONAL FUNDS IN SLOVAKIA

Place-based regional policy consists of a set of support measures aimed at improving local development conditions. In Slovakia, it is implemented through Act No. 336/2015 Coll. on the Support of the Least Developed Districts. However, concerns are growing over corruption, political clientelism, party patronage, and pork barrel politics in the distribution of financial resources allocated for local development. In other words, these practices involve the exchange of electoral support or changes in voting behavior for certain benefits or access to resources. When applied in a regional context, such political strategies represent a significant research problem. Our goal is to identify and statistically describe how pork barrel politics operates in relation to the spatial distribution of regional subsidies at the LAU2 municipal level in Slovakia.



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THE ECONOMIC AND THE HEALTH CRISIS IN CZECHIA: DIFFERENCES OR SIMILARITIES IN REGIONAL IMPACTS FROM A RESILIENCE PERSPECTIVE

Economic and health crises are characterised by their unequal impact on regions. While some regions may be severely and long-term affected by the crisis, others may not experience any negative impacts. This uneven regional impact of crises is a traditional subject of geographical research, which seeks to reveal the role of geographical context on the regional impact of different types of crises using various theoretical-methodological approaches. The concept of resilience, enabling us to quantify the strength of crises, is currently highly applied and seems to be appropriate for this type of research questions and analyses. The main objective of the paper is to reveal whether the economic crisis starting in 2009 and the health crisis starting in 2020 differ in their impacts over time, space and on different regional outcomes in Czechia. Attention will be paid to the similarities and differences between the two crises and their regionally differentiated impact. A spatial quantitative analytical framework using spatial statistical methods implemented in GIS software is used to analyse the level and the dynamics of micro-regional economic and health outcomes in pre-crisis, crisis, and post-crisis periods in Czechia. The results show that both crises had a highly regionally differentiated impact, with certain regions being affected significantly more than others.



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GERMAN AND POLISH PLACE NAMES IN CZECHIA

For historical reasons only two foreign influences are known in Czech place names. There are predominantly German, which is visible on the entire territory of today's Czech Republic, and secondly Polish, which is used on a relatively small area of Tešín Silesia. This presentation summarizes the historical background of the use of names originating from both mentioned languages as well as their current state, including more detailed examples (Havlíckuv Brod, Sokolov, Karlštejn, etc.). But while the German names were removed after the Second World War and have survived only to a limited extent and moreover significantly adapted to the Czech language, Polish names are still in the public space thanks to the existence of a Polish minority concentrated in about 30 municipalities of the districts of Karviná and Frýdek-Místek.



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**DEVELOPMENT AND CURENT SITUATION OF
FOREIGN PARTNERSHIP COOPERATION OF CITIES,
TOWNS AND COMMUNES OF THREE SELF-
GOVERNING REGIONS OF THE SLOVAK REPUBLIC
BORDERING WITH THE CZECH REPUBLIC**

The beginning of cities, towns and communes partnerships in Europe dates back mainly after the Second World War, when there was an interest in bringing the inhabitants to a more mutual understanding of each other. To this day, this form of cooperation is the most widespread in Europe. Köhle (2005) identified a gradual change on the European scene from „partnership of reconciliation“ to „partnership of integration“. Instead of merely symbolic emphasis on togetherness, the goal is increasingly shifting towards concrete and functional cooperation.

Comparisons between European countries in the field of city, town and commune twining have been greatly hampered by a lack of information. This is still true for the countries of Central Europe, including Slovakia, which is why all analyses to this point have been based on the results of surveys. The aim our conference contribution is to analyse the development of foreign partnership cooperation of cities, towns and communes in three self-governing regions of the Slovak Republic bordering the Czech Republic, i.e. Trnava, Trenčín and Žilina regions. The research on the development of partnership between cities, towns and communes is part of the CZ-SK project: Town-twinning – a means of getting to know each other and integration, which was undertaken to the geographical departments of Masaryk University in Brno and Comenius University in Bratislava. The basis for the analysis was previous research, the most comprehensive and extensive of which (all communes in the Slovak Republic) was carried out in 2011 thanks to the Association of Cities, Towns and Communes of Slovakia (Špaceková, Labátová and Durechová, 2012). Based on the conducted survey, we will compare the development tendencies of cities, towns and communes partnership (degree of participation, intensity, forms, areas, barriers, etc.) with emphasis on the Slovak-Czech partnership.



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CITY AND MEMORY: COMMEMORATIONS OF WORLD WAR II IN THE LANDSCAPE OF WARSAW

Warsaw's urban landscape is deeply interwoven with the legacy of World War II, making it a unique space for studying the interaction between memory, society, and history. This study, titled *City and Memory: Commemorations of World War II in the Landscape of Warsaw*, explores how the memory of the war is preserved, represented, and interpreted within the city's public spaces. The research focuses on the locations, forms, and meanings of monuments and places of remembrance within Warsaw's historical landscape. Additionally, it examines how these commemorations contribute to shaping the identity of both the city and its inhabitants.

The research findings indicate that the majority of remembrance sites in Warsaw are situated in locations directly linked to World War II events that unfolded in the city. This spatial distribution is primarily influenced by one of the most tragic episodes in Polish history—the Warsaw Uprising of 1944. The study identifies a diverse range of commemorative forms, from grand monuments to smaller plaques and memorial stones, each contributing to the city's historical narrative in distinct ways.

In conclusion, the study underscores the integral role of remembrance sites in shaping Warsaw's urban identity and public memory. These spaces serve as both physical and symbolic reminders of the past, influencing how history is experienced and interpreted by present and future generations.



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HISTORY OF INFORMATION DISTORTION IN THEMATIC MAPS: FROM EARLY CARTOGRAPHY TO MODERN MEDIA

The distortion of information on maps has been present since the earliest stages of cartography. Throughout history, maps have served not only as tools for navigation and spatial representation but also as instruments of persuasion, propaganda, and manipulation. From ancient and medieval maps, which often reflected ideological or religious worldviews, to the development of modern thematic cartography, various techniques have been used to shape perceptions and influence decision-making.

This study explores the evolution of information distortion on thematic maps, tracing its historical roots and examining how these methods have adapted to changing technological and social contexts. The discussion covers early cartographic distortions, propaganda maps, and the transition from printed to digital media, where the accessibility of mapping tools and the spread of misinformation have created new challenges. By analyzing historical and contemporary examples, this work highlights recurring patterns of distortion and their implications for map users in the digital age.

As part of this study, 26 thematic maps published in contemporary electronic media were analyzed to identify common methods of information distortion. The research covered maps appearing on social media platforms and in streaming productions, where cartographic content is often created without professional expertise. Based on this analysis, a classification of distortion techniques was developed, highlighting both intentional and unintentional manipulations. The findings provide insight into how these methods compare to historical cartographic distortions and emphasize the need for critical interpretation of maps in the digital era.



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**WHERE DO WE COME FROM? WHAT ARE WE?
WHERE ARE WE GOING? A JOURNEY IN SEARCH OF
FORGOTTEN MINORITIES: FOREST GERMANS.**

The Forest Germans community developed from the descendants of medieval German colonists as a result of their mixing with the Polish population that arrived in parallel, the processes of adaptation and assimilation, in at least three settlement islands located on the Polish-Russian-Hungarian border, starting from the mid-14th century. In this way, in the 16th-18th centuries, a Polish cultural and territorial group with West Slavic-German roots was formed, inhabiting the central basins of the Wisloka and Wislok rivers. At the turn of the 19th and 20th centuries, the germinating Forest German identity, the appropriate ethnonym and choronym, were removed from scientific and popular discourse in Poland for political reasons. During World War II, the Nazis made an unsuccessful attempt to re-Germanize the Forest Germans. The effect of the turbulent 700-year history of Forest Germans is the fact that this community has retained the ancestral homeland, but has lost its memory and identity. Particularly important in the context of Forest Germans from a geographical perspective are the answers to three following questions: where do they come from, who are they and where do they live? In light of research from 2020-2025, the paper will try to show what we already know (why so little), why we are unable to learn more using traditional methods and how in the years 2025-2029 we intend to punch a hole in the wall blocking the way to new knowledge.



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IRAQ'S DISPUTED TERRITORIES AS A CENTER OF CONFLICT BETWEEN THE KURDISH AND IRAQI GOVERNMENTS

Iraq's disputed territories, known as disputed internal boundaries (DIBs), are a key issue of contention between the Kurdish administration in northern Iraq (Kurdistan Region of Iraq, KRI), which is partially governed by the Kurdistan Regional Government (KRG), and the central government in Baghdad (Government of Iraq, GoI). As a result, significant authority is held by non-state actors in the form of majority Shia armed militias within the Popular Mobilization Forces (PMF). The status of DIBs is addressed in the Iraqi constitution under Article 140, which outlines the steps to resolve the dispute. Specifically, these steps include normalization (the return of homes to previously displaced residents), a census, and a local referendum to determine whether the disputed territories will be integrated into the KRI or remain under the central government's control. The situation is further complicated by ethnic and religious diversity, ongoing forced population movements, Sunni-Shia tensions, and competition over oil and gas resources. Additionally, ungoverned spaces — territories lacking administrative authority — harbor remnants of the terrorist organization Islamic State in Iraq and Syria (ISIS), presenting a significant security challenge to both the KRG and the central government. The main actors wielding power in the chosen territories encompass not only political figures but also security, cultural and religious authorities.



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EXPLORING SUCCESS STRATEGIES OF MUNICIPALITIES THAT SHOULD NOT HAVE SUCCEEDED: THE CASE OF POLAND

A major part of the research on local economic development in Poland is focused on searching for patterns of spatial distribution of two categories of areas, which can be described as either “areas of success” or “areas of failure”. The study attempts to go beyond this analytical framework.

The main objective of the study is to identify factors that influenced the economic advancement of selected disadvantaged municipalities in Poland (these municipalities are characterised by their remote location, far from large urban centres, and their lack of substantial endogenous resources). In the initial phase of the research procedure, spatial units that demonstrated the most significant advancement in terms of economic growth indicators over the past two decades (from 2004 to 2023) were identified. Following this, the results of qualitative research will be presented, elucidating the mechanisms behind this advancement in identified municipalities (case studies).



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AUTOMATION OF ROAD GEOMETRY EXTRACTION FROM SMALL-SCALE MAPS

There is a massive amount of data stored inside of paper maps which could be used for various purposes or even unlock analysis which was not possible before. The overarching problem is that paper maps don't allow for the same amount of flexibility in spatial analysis that GIS applications do. The natural step would therefore be to convert them to GIS viable formats, but that is presently a time and cost consuming process. To alleviate this problem, research is being conducted on how to automatically extract features from these paper maps.

Hereby I would like to present my project titled "Automation of road geometry extraction from small-scale maps".

The goal of this project is to evaluate the most commonly used methods for automatically extracting road geometry from paper maps. Each method will be used on the same collection of map images, and evaluated based on qualitative and quantitative remarks. The result of this project will be: vector layers for every used method, a table with qualitative descriptions, a table with numeric data, and various visualizations portraying the differences between the used methods.

This project comes at a time in which more and more cartographical collections are being made available online without fees, there exists little research on this subject for Poland and there are vast improvements being made in Artificial Intelligence used in computer vision tasks. Innovation and popularization are the keys to making a difference in geography, and I would like to think my project does both.



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UNDERSTANDING POST-SOCIALIST URBAN INEQUALITIES: INSIGHTS FROM WARSAW

This study examines spatial inequalities in quality of life in Warsaw, highlighting disparities in access to public services, housing conditions, and environmental quality across urban districts. Using GIS-based spatial analysis and statistical methods, it identifies patterns of urban fragmentation shaped by the transition from a centrally planned economy to a market-driven urban system. The findings indicate that inequalities persist, particularly in access to education, healthcare, and green spaces, with central districts benefiting from better infrastructure while peripheral areas remain underserved.

Warsaw's experience is discussed in the broader context of post-socialist transformations in Central and Eastern Europe, where similar trends can be observed in other capital cities of the region. The study underscores the importance of strategic urban planning in addressing these disparities and promoting a more just and sustainable urban environment. In line with D. Harvey's concept of the "just city," the research highlights actionable strategies for policymakers and urban stakeholders to foster more equitable development.



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**TIME-SPACE DYNAMICS OF SOCIAL EXCLUSION:
SPATIAL AND EVOLUTIONARY ANALYSIS OF
SEGREGATION IN CZECH CITIES**

This paper examines the spatial and temporal dynamics of poverty, social exclusion, and segregation in Czechia from 2015 to 2023, leveraging a detailed database on social welfare benefit recipients. By mapping the most pronounced concentrations of poverty and social exclusion in Czech cities and regions, the study addresses the pressing need to understand and mitigate the challenges faced by socially and spatially segregated communities. The findings reveal two key trends. First, despite economic growth and improved well-being between 2015 and 2019, the concentration of vulnerable populations in segregated areas intensified. Second, the COVID-19 pandemic and the War in Ukraine introduced significant social and economic uncertainties, accelerating these trends and deepening inter-regional and intra-urban disparities.

These results are contextualized within the broader narrative of long-term social and urban development in a post-socialist country, with a focus on national and local policies addressing segregation and social exclusion. The study also explores narratives around at-risk populations, linking the findings to international debates while emphasizing the unique characteristics of Central and Eastern Europe.



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**DETERMINANTS AND OBJECTIVES OF FUNCTIONAL
AREAS COOPERATION AS A CHALLENGE FOR
TERRITORIAL DEVELOPMENT IN THE
INTERNATIONAL DIMENSION. THE EXAMPLE OF
THE OPOLE AND OLMOUC AGGLOMERATION.**

An important objective of the territorial approach to development is to shape sustainable and integrated urban areas development. This goal is being pursued in many EU countries through the implementation of Integrated Territorial Investments in functional urban areas. It is assumed that in order to achieve territorial cohesion, international cooperation in border areas should take place. The paper presents the conditions, needs and barriers to the implementation of this task. As an empirical example, the implementation of this task as part of the partnership project on the development of cooperation between the Opole and Olomouc agglomerations was presented. The research was based on a critical analysis of the literature, analysis of investment projects implemented in the studied areas and statistical indicators. The results of the research indicate that the assumed concept and shaping of integrated development are systematically implemented in the surveyed units. The cooperation of the territorial units forming the FUA and the mutual cooperation between the FUA should be assessed positively. It improves the quality of projects, accelerates the exchange of knowledge and skills, and fosters the creation and maintenance of a coherent network – in this case international. The imperfection of the implementation of this concept of development can be considered the priority of the objectives of the EU cohesion policy over local development needs.



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SYMBOLIC SPACE OF LVIV DURING THE FULL-SCALE RUSSIAN INVASION (FROM 2022 TO THE PRESENT)

The paper contains a synthetic description of spatial changes in Lviv after 2022, especially in terms of ideological directions determined by the ongoing defensive war. The changes were based on top-down actions under anti-Russian laws as well as bottom-up actions through city resolutions and the activities of the townspeople. The drive to completely annihilate the Russian and post-Soviet heritage correlates with the further growth of patriotic and nationalist attitudes, while at the same time being in a complicated relationship with the Polish narrative of the history of Lviv. As the second key cultural center of Ukraine after Kiev, Lviv remains a key place in the national consciousness of Poles. Therefore, both successful attempts at compromise and new areas of spatial conflicts and "misunderstandings" between the Polish and Ukrainian sides are constantly emerging, especially in the symbolic field. New street names, care for religious and tanatic places, funding and renovation of monuments, plaques or the possibility of operating cultural institutions are examples of such situations. In addition, as a result of the war, there is a dynamic crystallization of new identity elements of the Ukrainian nation (e.g. battle heroes), which are also already being mentioned in the urban space.

The paper contains a discussion of the above changes, an indication of their scale and specificity along with a chronological order. It also provides, in the author's opinion, the key causes of the phenomenon and the impact on the symbolic climate of the city.



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GEOGRAPHY AND GEOMETRY OF LOCAL GOVERNMENT STUDIES

This study explores the global research landscape surrounding Local Government Studies (LGS), focusing on the geographical distribution, disciplinary contributions, and thematic patterns that define the field. Despite the proliferation of journals and scholarly networks devoted to LGS, there remains no consensus on its boundaries or definition. What unites the field, however, is a shared recognition of its deep interdisciplinarity.

By examining contributions from a range of countries, this research maps the global academic engagement in LGS, identifying which countries lead in terms of publication volume and thematic influence. Special attention is paid to the internal composition of the field: Which subjects dominate? Are certain topics more prominent in some regions than others?

Methodologically, the study introduces a novel approach to analyzing topic evolution through the geometric framework of information spaces. Using mutual entropy-based distance metrics, it captures dynamic relationships between scientific concepts over time, surpassing the limits of traditional keyword-based methods. Applied to datasets such as ArXiv and JSTOR, the method reveals patterns of topic development and assesses the influence of key agents—including publishers, journals, and countries.

Building on existing typologies that categorize local government systems (e.g., Western, Northern, Southern, Central-Eastern Europe), the study further investigates whether academic output reflects these divisions. For example, Nordic countries are often seen to emphasize functional over democratic aspects of local governance—does this translate into research priorities? The findings offer insights into both the evolving identity of LGS and the broader structure of scholarly production.



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FROM PERIPHERY TO PROSPERITY? EASTERN SLOVAKIA'S DEVELOPMENT IN THE CONTEXT OF UKRAINE'S POTENTIAL EU MEMBERSHIP

This contribution provides a geographical perspective on the development of Eastern Slovakia in the context of Ukraine's potential membership in the European Union. By comparing the region's historically peripheral location with Burgenland in Austria, the study examines whether Eastern Slovakia could similarly transform this disadvantage into a competitive advantage through increased cross-border cooperation and investments. The analysis considers the war in Ukraine, Slovakia's strategic focus on supporting the integration of Eastern European states, and the inconsistencies in Slovak foreign policy. The region's historical lag in key economic indicators, such as housing construction and industrial production, is explored to understand potential challenges. Nevertheless, the stabilization of Ukraine and enhanced international cooperation could generate socio-economic opportunities for the border areas, particularly for larger cities like Košice and Prešov, and stimulate investments. The findings suggest that broader and consistent regional development policies are essential for Eastern Slovakia to fully capitalize on EU enlargement.



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HISTORICAL CULTURAL LANDSCAPES IN THE CZECH REPUBLIC

Historical cultural landscapes are shaped and influenced by long-term human activity, which enhances both the cultural and natural values of the landscape. These activities are usually sustainable over time and do not require intensive mechanization. Some historical cultural landscapes may also be relics, meaning that the economic activities that originally shaped them have ceased, yet significant traces of these activities remain visible in the landscape. Such landscapes are harmoniously formed, characterized by a traditional small-scale structure, and preserve historical elements of land use and settlement. In the Czech Republic, historical cultural landscapes have not yet been fully mapped, either in terms of their spatial extent or their diversity. This is mainly due to the wide variety of forms these landscapes can take and the lack of comprehensive data covering all relevant aspects nationwide.

For each evaluated historical cultural landscape, specific characteristics indicating its presence in the landscape were determined. Additionally, a database of these characteristics had to be made available for the entire Czech Republic in a format that allowed for processing and analysis in GIS. The spatial framework for analyses was based on the European Environment Agency's regular 1x1 km grid (EEA reference GRID), ensuring compatibility with other project activities. Based on available data, areas with a probable occurrence of these historical cultural landscapes were identified, including landscapes with preserved small-scale agricultural landscapes, forest landscapes, permanent grassland landscapes, vineyard landscapes, hop-growing landscapes, orchard landscapes, pond landscapes, spa landscapes, mining landscapes, and pilgrimage landscapes.



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FROM DATA TO DISCUSSION: POSSIBILITIES FOR ACTIVE LEARNING IN DEMOGRAPHY

University-level education in demography has a long-standing tradition, with analytical methods and data work at its core. However, there is a growing need for active and interactive approaches that foster critical thinking, analytical skills, collaboration, and student engagement. This opens up opportunities to combine well-established methods with interactive techniques that can support active learning and a deeper understanding of demographic processes. The aim of this paper is to present specific examples of activities related to selected demographic topics, explore ways to actively involve students in the learning process, and, rather than offering criticism, provide a reflection on “traditional” (lecture-based) teaching approaches.



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THE DEVELOPMENT AND CURRENT SITUATION OF THE CZECH-SLOVAK CROSS-BORDER COOPERATION

The aim of the contribution is to present the development of the Czech-Slovak border area in the context of its development in the last 30 years since the separation of Czechoslovakia and to present the results of the subjective view of Czech and Slovak mayors on the topic of cross-border cooperation along the Czech-Slovak border, the content and importance of cross-border activities, the meaning of the border and its perception, or its specifics.



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UNEQUAL VOTES, UNEVEN DISTRICTS? A SPATIAL PERSPECTIVE FROM KOŠICE

This contribution explores spatial disparities in electoral representation using the city of Košice as a case study. It focuses on the proposed reorganization of municipal districts and its implications for the equality of representation under the “one person, one vote” principle. By applying spatial analysis to demographic and territorial data, the study assesses how uneven population distribution across districts affects representational fairness. Although the final configuration of electoral districts remains undetermined, the analysis anticipates likely scenarios and highlights existing disproportionalities. The findings offer a critical perspective on electoral geography in urban contexts and provide input for future reforms aimed at enhancing electoral equality.



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POLAND UPSIDE DOWN - WHY DOES INDONESIA'S GEOGRAPHY OF MEMORY MATTER IN CENTRAL AND EASTERN EUROPE?

Geography of memory locates history and its representations within specific spaces. While certain patterns of commemoration are globally recognizable, Southeast Asia remains underrepresented in scholarly discussions. This research aims to address that gap by focusing on Indonesia. The aim of this study was to examine the symbolic landscape of Surabaya, Indonesia's second-largest city, and determine the historical factors that have influenced it. Field research conducted in May 2024 identified and analyzed 52 memorial sites, documenting their form, topic, commemorated heritage, period of creation, and inscription language. Monuments dominate, with over half of the sites dedicated to historical events. The Indonesian Revolution (1945–1949) and national heritage are the most frequently commemorated themes, though Dutch heritage is also present. Notably, 68% of the memorials were erected after Suharto's fall in 1998, reflecting shifts in historical narratives. Over 90% of inscriptions are in Indonesian, sometimes accompanied by English and rarely by Dutch, implying that these commemorations primarily address local residents. Surabaya's role as the "City of Heroes" is strongly emphasized, particularly through memorials marking the November 10, 1945 battle, a key event at the beginning of the Indonesian Revolution. Additionally, figures and events related to the colonial past are increasingly commemorated. Considering the fact that more than half of them were created in the Reformasi period after 1998, it indicates an opposite approach to addressing the past through commemorations compared to Poland. Similarities, however, are noticeable in the main theme, which is the broadly defined struggle for independence.



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THE SPATIAL RANGE OF GLOBAL CORPORATION BRANCHES INFLUENCE ON THE LOCAL AND REGIONAL LABOR MARKET ON THE EXAMPLE OF COMMUTING TO WORK TO GSK IN POZNAN

Daily commuting streams to work constitute one of the basic spatial relations and reflect the connections of an economic entity - in this case a branch of an international concern - with the local and regional environment, thus determining their spatial range of influence. Commuting to work, which is a very important phenomenon not only socially but also economically, is one of the most basic bonds of an enterprise with its surroundings and the local community, and as a result, indicates the degree of its embeddedness in the local space and the region.

Commuting to work is one of the basic elements of location analysis in socio-economic geography, as it indicates the degree of compatibility between the systems of places of residence and places of work. Location analysis involves either graphical presentation of commuting flows using ribbon diagrams, or tabular presentations, allowing for the calculation of direction indicators and commuting intensity. Most often, attention is paid to two spatial properties: a) distance from the workplace and b) direction. These properties allow the use of various mathematical and statistical methods in the analysis of commutes in order to detect certain regularities in their spatial structure.

Purpose of the study:

- detection of spatial connections of a large industrial enterprise located in a large urban agglomeration based on the analysis of the directions, intensity and spatial scope of employees' commuting to work, i.e. based on data on the employees' places of residence (towns or communes);
- determining the degree of spatial dispersion of commuting flows using spatial analysis and cartographic methods, as well as an attempt to detect certain regularities in the spatial distribution of commuting to work;
- based on the results obtained, an attempt to determine the degree of embeddedness of the company in the local space and the region.



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THE ROLE OF GEOGRAPHICAL ATLASES IN SHAPING PERCEPTIONS OF TERRITORIAL CHANGES IN CENTRAL EUROPE IN THE 20TH CENTURY

My study examines the political role of geographical atlases, particularly in relation to territorial changes after World War I and II. Despite their significant role in education and geopolitical discourse, atlases have not been widely analyzed as political instruments. The research focuses on atlases published between 1918 and 2025 in Poland, Germany, Czechia, Slovakia, USA, Russia, France, and Great Britain, with a case study on the German territories annexed by Poland in 1918–1922 and 1945.

The study analyzes how geographical atlases have been edited to reflect the political agendas of the publishing countries, shaping public perceptions of border legitimacy. Elements such as content selection, line types, color usage, and the presentation of toponyms are examined to reveal the political messages embedded in these maps. The research also considers the broader publishing context, including authorship, the geopolitical interests of the country of publication, and how cartographers responded to specific historical events.

Preliminary findings indicate that Polish atlases consistently emphasized the annexed territories as integral parts of the state, aligning with Poland's political goals. In contrast, German atlases often depicted these territories as temporarily lost, reflecting Germany's revisionist policies. Similar methods were used in other analyzed countries, but less frequently.

This study contributes to the debate on persuasive cartography by investigating how geographical atlases have shaped public understanding of borders, identity, and territorial claims.



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DIRECTIONS OF COMMUTING AS A SYMPTOM OF CHANGES IN FUNCTIONAL LINKAGES IN THE WARSAW METROPOLITAN AREA

Changes in the intensity of linkages in metropolitan areas can occur at different rates and in different directions. One aspect of contemporary changes is the progressive suburbanization and transfer of economic activity (entrepreneurship, functions) to hinterland. An important element of these changes is the growing importance of the zone out of the metropolis (areas outside the core city) in the spatial structure of the labour market. This can be tracked by changes in the intensity and directions of commuting within the boundaries of functional urban areas.

To determine the scope of contemporary changes, the scale and directions of changes in commuting to hired work in the Warsaw metropolis (Warszawski stołeczny region according to the NUTS2 – PL91 nomenclature) were analysed. The analysis used data on commuting to work outside the municipality of residence based on the results of the 2011 and 2021 censuses. This made it possible to indicate, among the 70 communes that have been part of the region since 2018, i) areas that are gaining/losing their attractiveness as a place to work and ii) to what extent Warsaw is retaining/losing its importance in the entire regional labour market.



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LIVING SAFELY. PROPOSALS FOR CHANGES IN PUBLIC SPACES AS A RESULT OF SCHOOLCHILDREN'S PARTICIPATION

Safety is a key element of human well-being in the psychological, socio-cultural, and economic dimensions, shaping the need for involvement in actions for the common good. The presentation aims to explain various solutions in public spaces of selected towns and cities in Poland, intended for improving residents' safety. The study was developed through schoolchildren's participation within the project "Understanding the known, recognizing the unknown - how does geography explain the world?" conducted from 2022 to 2024, which involved 650 schoolchildren from 22 secondary schools across Poland. The presentation focuses on one specific thematic bloc of the project titled "Got a problem? You are not alone! Social pathology in geographical terms."

Schoolchildren were asked to propose changes in their school environments and places of residence. Research methods included document analysis, such as city or municipality development strategies and land use planning studies. Activities took place in school and urban spaces, utilizing field research methods, participant observation, and presentations. Encouraging schoolchildren to develop attitudes of social engagement was crucial. Results were presented in summary meetings with teachers, school management, decision-making bodies, and NGOs. Selected examples of improved safety and aesthetics, such as changes in city squares or school surroundings, were showcased at local government meetings. This allowed for identifying threats and reducing or eliminating them. The research is universal, applicable to other areas, and increases the potential of schoolchildren for social activity in adult life and responsibility for the environment.



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GATE OR BARRIER? HISTORICAL COMMUNICATION ROUTES IN THE LOW BESKIDS

The presentation will present the progress of research on the cultural landscape of the Low Beskids. The subject of the research is the communication routes running through the mountains in the area of the former Polish-Hungarian borderland, especially the course of these routes and whether it has changed from the 14th century to the present. This is a special area due to its transverse valleys. The course of communication routes has remained partly unchanged over the centuries. Most villages and towns have remained in the same place, however, there are also places that lose their importance over time to such an extent that they become depopulated, abandoned, gradually disappear from the landscape, are overgrown by previously cleared vegetation or ploughed. Some disappear irretrievably, relics of others await discovery under a layer of plants and soil. This process, similarly to later road regulations, can lead to changes in the course of communication routes. However, reconstructing the course of old roads is of enormous importance for learning about the past and understanding the present, e.g. it explains the directions of migration and short-term circulation, the shape and evolution of the settlement network, and even allows us to reconstruct and understand historical events and processes such as the course of wars or the spread of goods, ideas or diseases (directions, stages, pace). The main objective of the work is to reconstruct former road communication routes.



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SMART AIR POLLUTION MANAGEMENT: EXPLAINABLE ARTIFICIAL INTELLIGENCE AND SPATIAL ANALYSIS FOR SUSTAINABLE URBAN DEVELOPMENT

Urban air quality plays a crucial role in shaping public health and sustainable city policies. Effective environmental management requires not only precise monitoring of air pollution but also a deeper understanding of its spatial and temporal variations. This study combines Explainable Artificial Intelligence (XAI) with spatio-temporal geostatistics to provide a transparent framework for analyzing particulate matter (PM_{2.5}) dynamics. A dense network of 52 IoT sensors deployed across an urban municipality and its surroundings serves as the data source, enabling the identification of key factors influencing air pollution trends.

The research highlights significant seasonal differences in pollution patterns. In summer, PM_{2.5} concentrations exhibit lower spatial variability, with time of day being the most influential factor, whereas winter conditions lead to greater spatial variation, largely driven by atmospheric pressure. The identification of four distinct spatial clusters with varying predictor importance further underscores the complexity of pollution dispersion. Additionally, transition matrix analysis reveals both stable and dynamic clusters, reflecting the seasonal shifts in pollution sources and meteorological influences typical of temperate climates.

By offering a transparent interpretation of air pollution dynamics, this approach enhances decision-making in urban environmental management. The insights gained contribute to the development of policies aimed at mitigating pollution and promoting healthier urban living environments. A better understanding of spatial and temporal variability in air quality supports sustainable urban planning, providing a foundation for effective long-term strategies in air pollution control and public health protection.



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FRUIT TREES AS ELEMENTS OF FORMER SETTLEMENT STRUCTURES: THE CASE OF SMERECZNE VILLAGE (BESKID NISKI, POLAND)

Fruit trees represent a significant element of cultural landscape as they form a lasting component of settlement networks and, in the event of settlement discontinuity, can become relics of former land use. The aim of this study is to reconstruct the landscape changes and assess their impact on the presence of fruit trees.

The study area is the abandoned village of Smereczne (Podkarpackie Voivodeship, Poland), located in the Beskid Niski range (Western Carpathians). It was destroyed in 1944, during the passage of the war front, and its population was displaced. The area was never permanently resettled and underwent significant landscape changes over the following decades. Data were collected through fieldwork conducted within the administrative boundaries of the village, including mapping and descriptions of fruit trees. Each tree was documented using a pre-designed survey form that included data on its basic parameters and surrounding environment. Additional information about anthropogenic features was obtained from LIDAR data, while changes in land use following the village's abandonment were reconstructed using topographic maps.

The analysis identified areas with higher densities of both fruit trees and anthropogenic features. The location of some trees refers to the still-visible layout of agricultural terraces on the slopes of nearby hills. Combined with data on land cover changes, this analysis allowed for an understanding of processes occurring over the decades since the disappearance of permanent settlement.

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