GEO-HETEROGENEITY IN THE CONTEXT OF THE EU¹

Denisa Ciderova Vladimira Repasova University of Economics in Bratislava, Slovakia

Abstract

Classification of the project of European integration tends to derive predominantly from a justification on either political or economic grounds. Yet, owing to the complexity of causality in the logic of European integration both politics and economics (or rather geopolitics and geoeconomics) have been decisive for further heading of integration in Europe, which is most visibly represented by the European Union (EU). Current global economic crisis significantly accelerated initiatives seeking further integration in the EU, even with calls for a political union. Now with the EU embracing Croatia as its 28th Member State since 1 July 2013, the Union's enlargement policy – also referred to as "soft power" – has been repeatedly given credit for having motivated reform efforts in candidate or potential candidate countries. Recent fast pace of integration in the EU in terms of deepening, widening and enlargement in the context of the unprecedented global economic crisis represents a challenge for conceptualising and reflecting on policy-making. Adaptability has become a must; hence, interdisciplinarity increasingly becomes a crucial driving force in higher education in terms of research just like in teaching. Both the prospects of the Western Balkans region as well as the neighbourhood of the EU inspire us to consider and elaborate on the interdisciplinary nature of the links of geopolitics (through traditional or innovative approaches to geopolitics) to a number of evolving related concepts in this paper at the background of ambiguity of the term "interdisciplinarity" as well as possible shifts in interpretation across the scientific community.

¹ This article resulting from scientific research conducted at the University of Economics in Bratislava in the framework of the VEGA project No. 1/1057/12 (Department of International Trade, Faculty of Commerce of the University of Economics in Bratislava) represents extended version of the paper presented by both authors at the 1st Annual International Interdisciplinary Conference (AIIC 2013) organised by the European Scientific Institute and the University of the Azores on 24-26 April 2013 in Ponta Delgada, Azores – Portugal.

Keywords: European integration, interdisciplinary research, geopolitics, geo-economics, "geo-heterogeneity"

"The disciplinary structure, and the creation and acceptance of new disciplines, is fundamental to progress in modern science. Disciplines identify groups of experts, networks of specialists able to understand and comment critically on new research. They store and transmit this specialised knowledge. They provide funding and career structures. However, an intellectually isolated discipline quickly becomes a moribund discipline. Good interdisciplinary research structures not only open up new areas of research, but also provide flexibility and expansion possibilities for traditional disciplines. Interdisciplinary research arises in a variety of different ways from natural evolution into neighbouring disciplines, to the use of new research tools and technologies which open up new possibilities across disciplines, to the need to address complex problems which can only be solved by several disciplines working together."

European Union Research Advisory Board: Interdisciplinarity in Research. EURAB 04.009-FINAL, April 2004, p. 2.

Introduction

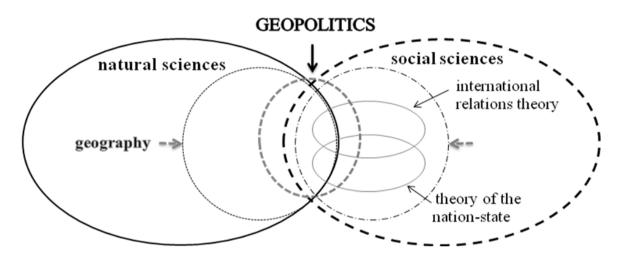
The European Union Research Advisory Board characterised **multidisciplinarity** as *different disciplines working together without an* aspiration to synthesise cognitive structures contrary to **interdisciplinarity** with *different disciplines working together and trying to synthesise cognitive* approaches in its 2004 report on interdisciplinarity in research while pointing out at the multitude, variety, vagueness, contradiction or even absence of definitions. In our research we wish to endorse the following (academic) discipline. It draws on knowledge from different disciplines but stays within their boundaries. Interdisciplinarity is the knowledge extensions that exist between or beyond existing academic disciplines or professions. It analyses and synthesizes links between disciplines into coordinated and harmonized whole. Transdisciplinarity is more holistic and tries to relate all disciplines into a coherent whole. It transcends the disciplinary boundaries to examine the dynamics of whole system in a holistic fashion."² published in the June 2013 Special Edition of the European Scientific Journal. The aim of this article is to provide an insight into "geo-heterogeneity" – on the basis of zooming in on the most relevant "geo-"categories – in the context of the European Union (EU).

² Lehtinen, Uolevi. Multidisciplinarity in Theory Building: Possibilities of Combining. In European Scientific Journal. Vol. 9, Special edition No.1, June 2013, p. 2.

"Geo-heterogeneity"

As a borrowing from the Greek language used in the formation of compound words the "**geo-**"³ prefix represents "*the earth*"⁴ in combination with terms such as *chemistry, demography, dynamics, economics, history, linguistics, physics, politics, psychology, statistics*, etc., stretching them into or even across a number of (academic) disciplines and/or sub-disciplines (Fig 1a).





Legend:

_____ political science

Source: Adapted from the original version in the Slovak language in Volner, Štefan. Geopolitika : klasická - nová : EÚ - geopolitický aktér 21. storočia. 1st ed. Bratislava: IRIS, 2010, p. 194.

In purely linguistic sense terms $diversity^5$ and $heterogeneity^6$ are associated with a variety of converging or diverging interpretations across a

³ Webster's encyclopedic unabridged dictionary of the English language. New York (NY): Portland House, 1989, p. 592.

⁴ **Geography** and **geology** are defined as "the science dealing with the areal differentiation of the earth's surface, as shown in the character, arrangement, and interrelations over the world of such elements as climate, elevation, soil, vegetation, population, land use, industries, or states, and of the unit areas formed by the complex of these individual elements" and "the science that deals with the physical history of the earth, the rocks of which it is composed, and the physical changes which the earth has undergone or is undergoing", respectively. Webster's encyclopedic unabridged dictionary of the English language. New York (NY): Portland House, 1989, p. 592.

⁵ Antonym: *uniformity*

⁶ Antonym: *homogeneity*

number of languages, with "**geodiversity**" interpreted by M. Stanley as "*the link between people, landscapes and their culture through the interaction of biodiversity, soils, minerals, rocks, fossils, water, wind, ice and the built environment*"⁷. Hence, in our research we refer to the compound term "**geo-heterogeneity**" when mapping "**geo-**" categories such as:

- "geo-civilization": e.g. Wei RUAN (Geo-Civilization, 2012);
- "geohistory" (*géohistoire*): e.g. Alan R. H. BAKER (Classifying Geographical History, 2007);
- "geoculture" (*géoculture*): e.g. Nikolai Sergeevich ROZOV (Geopolitics, Geoeconomics, and Geoculture: The Interrelation of Dynamic Spheres in the History of Russia, 2012);
- **"geopolitics"** (*géopolitique*): e.g. John A. AGNEW (Making the Strange Familiar: Geographical Analogy in Global Geopolitics, 2009);
- "geo-economics" (géoéconomie): e.g. Edward N. LUTTWAK (The Endangered American Dream: How to Stop the United States from Becoming a Third World Country and How to Win the Geo-economic Struggle for Industrial Supremacy, 1993); etc.⁸.

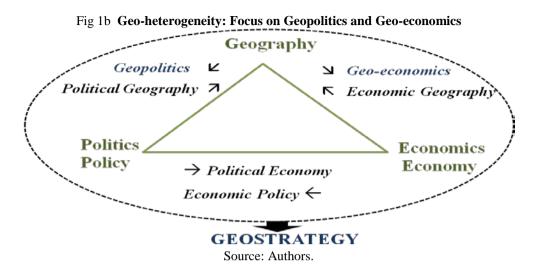
Whilst paying closer attention merely to *geopolitics* and *geo-economics* in this article, we perceive variability of their interpretation when encompassing the following definition: "*Le mot anglais geopolitics* est plus centré sur l'idée de confrontation (le sens du mot *politics*) manifestée dans et déterminée par la géographie. *Le mot français « géopolitique »* réoriente le concept vers le rapport sociétal au territoire, et serait plus proche du mot *policy*."⁹ in our considerations. Analogically to the dimensions of *politics* and *policy* in linguistic sense with regard to the term *geopolitics* we also observe occurrence of terms *geo-economics* and *geo-economy*¹⁰ in the "geojargon" (Fig 1b, further elaborated in the form of an applied interactive matrix in Fig 3a).

⁷ Stanley, Mick. Topics – Geodiversity: our foundation. In Geology Today. Vol. 19, No. 3, May-June 2003, p. 104.

⁸ E.g. "**geosheeltics**" by Sudeepta Adhicari (From geopolitics to geosheeltics: A new dimension to post-cold War geopolitics. Conference abstracts. Beer Sheva : Haifa, 1998) cited in: Ivanička, Koloman. Globalistika – Poznávanie a riešenie problémov súčasného sveta. Bratislava: IURA EDITION, 2006, p. 27.

⁹ Gauchon, Pascal - Huissoud, Jean-Marc (eds.). Les 100 mots de la géopolitique. Deuxième édition mise à jour: 2010, juillet. Collection encyclopédique "Que sais-je?" No. 3829. Paris: Presses Universitaires de France, 2010, p. 4.

¹⁰ Cf. P. Dicken cited in Sparke, Matthew – Lawson, Victoria. Entrepreneurial Geographies of Global-Local Governance, p. 331 in: Agnew, John - Mitchell, Katharyne - Ó Tuathail, Gearóid (eds.). A Companion to Political Geography. Blackwell Companions to Geography Series. Malden (MA): Blackwell Publishing, 2008.



J. Agnew, K. Mitchell & G. Ó Tuathail claim that contemporary political geography is dynamic and diverse, an intellectual enterprise open to geographers and non-geographers that is distinguished by the critical nature of the questions it asks and the themes it pursues.¹¹ Thus, a non-exhaustive list – subject to interpretation – follows:

- **German (school of) geopolitics** (*École allemande de géopolitique*): F. Ratzel, R. Kjellén, F. Naumann, K. Haushofer, K. Schmitt, C. Ritter, etc.;
- Anglo-Saxon (school of) geopolitics (École anglo-saxonne de géopolitique): A. Mahan, H. Mackinder, N. Spykman, S. B. Cohen, C. S. Gray, G. R. Sloan, D. W. Meinig, H. Kissinger, I. Wallerstein, Z. Brzezinski, E. N. Luttwak, F. Fukuyama, S. P. Huntington, etc.;
- French (school of) geopolitics (École française de géopolitique): P.
 V. de la Blache, A. Chéradame, J. Ancel, A. de Benoist, Y. Lacoste,
 P. M. Gallois, J. Parvulesco, M. Foucher, M. Foucault, Y. Chauprade, etc.;
- Eurasian (school of) geopolitics: P. N. Savickij, N. S. Trubeckoj, R. O. Jakobson, E. Suess, K. S. Gadžijev, G. A. Zjuganov, A. G. Dugin, etc.;

¹¹ Agnew, John – Mitchell, Katharyne – Ó Tuathail, Gearóid. Introduction, p. 5. In Agnew, John – Mitchell, Katharyne – Ó Tuathail, Gearóid (eds.). A Companion to Political Geography. Blackwell Companions to Geography Series. Malden (MA): Blackwell Publishing, 2008; cf. Kofroň, J. Geopolitika na pomezí geografie a mezinárodních vztahů – Mezi prostorem intersubjektivním a objektivním. In Mezinárodní vztahy. Vol. 47, 2/2012, pp. 57-78.

- **Critical geopolitics**: G. Ó Tuathail, J. Agnew, S. Dalby, M. Sparke, K. Dodds, D. Campbell, S. Graham, S. Roberts, P. Routledge, J. P. Sharp, N. Smith, etc.¹²

A wide array of applied concepts of *geopolitics* has been documented in writings referring to e.g. "emotional geopolitics of fear"¹³, "geopolitics [and geoeconomics] of hunger"¹⁴, "geopolitics of energy"¹⁵, "geopolitics of oil and climate change"¹⁶, or "geopolitics of climate change"¹⁷ – issues not negligible in viewing world developments through optics of key global geopolitical actors (Fig 2a-b). While world population accounted for almost 7 billion in 2010, it is expected to exceed 9.5 billion by 2060; the share of world population is foreseen to be roughly sustained by most G-20 members, with notable relative decreases envisaged besides China by the EU, Brazil, Indonesia, Japan, and the Russian Federation.

¹² Authors wish to acknowledge additional *écoles de géopolitique* not specified in this article, including researchers publishing extensively in the Czech Republic as well as the Slovak Republic.

¹³ Pain, Rachel. Globalized fear? Towards an emotional geopolitics. In Progress in Human Geography. Vol. 33, Issue 4, 2009, pp. 466-486. DOI: 10.1177/0309132508104994.

¹⁴ Essex, Jamey. Idle Hands Are The Devil's Tools: The Geopolitics and Geoeconomics of Hunger. In Annals of the Association of American Geographers. Vol. 102, Issue 1, 2012, pp. 191-207. DOI: 10.1080/00045608.2011.595966.

¹⁵ Pascual, Carlos. The Geopolitics of Energy: From Security to Survival. Brookings Institution. Available at: http://www.brookings.edu/~/media/research/files/papers/2008/1/energy%20pascual/01_energy_pascual.pdf>.

¹⁶ Benea, Ciprian - Beniamin – Baciu, Adrian. The Geopolitics of Oil and Climate Change. In Annals of the University of Oradea, Economic Science Series. Vol. 1, Issue 2, 2012, pp. 70-74.

¹⁷ Bošnjaković, Branko. Geopolitics of Climate Change: A Review. In Thermal Science. Vol. 16, No. 3, 2012, pp. 629-654. DOI: 10.2298/TSCI120202127B.

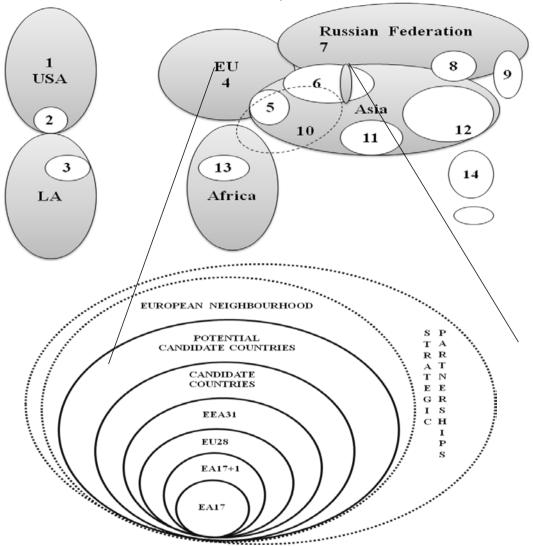


Fig 2 Key Global Geopolitical Actors (a) with the zoom-in perspective of the EU as a Global Player (b)

Legend 2a: 1-USA, 2-Mexico, 3-Brazil, 4-European Union, 5-Turkey, 6-countries of Central Asia and the Caucasus region, 7-Russian Federation, 8-Korea, 9-Japan, 10-Islamic countries, 11-India, 12-China, 13-Nigeria, 14-Indonesia.

Source: Adapted from the original versions in the Slovak language in Volner (2010, p. 418) & Volner (2012, p. 26).

Legend 2b: EA17 – Euro Area 17 (2013); EA17+1 – Euro Area 18 (2014); EEA 31 – European Economic Area 31; candidate countries: the Former Yugoslav Republic of Macedonia, Iceland, Montenegro, Serbia, Turkey; potential candidate countries: Albania, Bosnia and Herzegovina, Kosovo under UNSCR 1244/99; European Neighbourhood (Policy): Algeria, Armenia, Azerbaijan, Belarus, Egypt, Georgia, Israel, Jordan, Lebanon, Libya, Moldova, Morocco, Occupied Palestinian Territory, Syria, Tunisia, Ukraine; strategic partners of the EU28 in terms of the G-20: Argentina, Australia, Brazil, Canada,

China, India, Indonesia, Japan, Mexico, Russian Federation, Saudi Arabia, South Africa, South Korea, Turkey, United States.

Source: Authors.

Out of G-20 Germany, France, Italy and the United Kingdom (UK) represent the most populous EU Member States, and Turkey has been in the position of the most populous candidate country negotiating its membership in the Union. The European Union does not represent a single or major nation, but as far as its members act in terms of the EU motto "United in diversity", it has the potential to successfully define and fulfil its own geostrategy¹⁸ continuously shaped by geopolitics and geo-economics.

Diversity in the Context of the European Union

"United in diversity" as the motto of the EU is eloquent in terms of the characteristics of countries involved in European integration; variety in general (Tab 1a) as well as in political and economic sense (Tab 1b) is illustrated in the following passage.

Code	Country	Location	Total Area (km²)	Population	Principal language(s)	
DE	Germany	C Europe	357,022	81,305,856	German	
FR	France	W Europe	643,801	65,630,692	French; regional dialects (Provençal, Breton, Alsatian, Corsican, Catalan, Basque, Flemish)	
IT	Italy	S Europe, jutting into Mediterranean Sea	301,340	61,261,254	Italian; French, German, Slovene	
NL	the Netherlands	NW Europe, on North Sea	41,543	16,730,632	Dutch, Frisian	
BE	Belgium	W Europe, on North Sea	30,528	10,438,353	Dutch, French, German	
LU	Luxembourg	W Europe	2,586	509,074	Luxembourgish; German, French (admin.)	
UK	United Kingdom	Off NW coast of Europe, across English Channel, Strait of Dover, North Sea	243,610	63,047,162	English; Scots, Scottish Gaelic, Welsh, Irish, Cornish	
DK	Denmark	In N Europe, separating	43,094	5,543,453	Danish, Faroese,	

Tab 1a General Perception of the Context of the European Union

¹⁸ as "*strategic management of geopolitical interests*" in Brzezinski, Zbigniew. The Grand Chessboard: American Primacy and Its Geostrategic Imperatives. New York: Basic Books, 1997, p. 31.

		North and Baltic seas		[Greenlandic;	
		Tortif und Buttle seus			English	
IE	Ireland	In Atlantic Ocean just W of Great Britain	70,273	4,722,028	English, Irish	
EL	Greece	Occupies S end of Balkan Peninsula in SE Europe	131,957	10,767,827	Greek	
ES	Spain	In SW Europe	505,370	47,042,984	Castilian Spanish; Catalan, Galician, Basque	
РТ	Portugal	At SW extreme of Europe	92,090	10,781,459	Portuguese, Mirandese	
SE	Sweden	On Scandinavian Peninsula in N Europe	450,295	9,103,788	Swedish	
AT	Austria	In SC Europe	83,871	8,219,743	German; Turkish, Serbian, Croatian	
FI	Finland	N Europe	338,145	5,262,930	Finnish, Swedish	
PL	Poland	On Baltic Sea in EC Europe	312,685	38,415,284	Polish	
CZ	Czech Republic	In EC Europe	78,867	10,177,300	Czech; Slovak	
HU	Hungary	In EC Europe	93,028	9,958,453	Hungarian	
SK	Slovak Republic	In EC Europe	49,035	5,483,088	Slovak; Hungarian, Roma, Ukrainian	
LT	Lithuania	In E Europe, on SE coast of Baltic	65,300	3,525,761	Lithuanian; Russian, Polish	
LV	Latvia	E Europe, on Baltic Sea	64,589	2,191,580	Latvian; Russian, Lithuanian	
SI	Slovenia	In SE Europe	20,273	1,996,617	Slovenian; Serbian, Croatian, Italian, Hungarian	
EE	Estonia	E Europe, bordering Baltic Sea and Gulf of Finland	45,228	1,274,709	Estonian; Russian	
CY	Cyprus	In E Mediterranean Sea, off Turkish coast	9,251	1,138,071	Greek, Turkish; English	
МТ	Malta	In C of Mediterranean Sea	316	409,836	Maltese, English	
RO	Romania	SE Europe, on the Black Sea	238,391	21,848,504	Romanian; Hungarian, Romany	
BG	Bulgaria	SE Europe, in E Balkan Peninsula on Black Sea	insula on 110,879 7,037,935		Bulgarian; Turkish, Roma	
HR	Croatia	SE Europe, on the Balkan Peninsula	56,594	4,480,043	Croatian; Serbian	

IS	Iceland	Island at N end of Atlantic Ocean	103,000	313,183	Icelandic, English, Nordic langs., German	
NO	Norway	W part of Scandinavian Peninsula in NW Europe	323,802	4,707,270	Bokmal Norwegian, Nynorsk Norwegian; Sami	
LI	Liechtenstein	C Europe, in Alps	160	36,713	German; Alemannic dialect	
TR	Turkey	Occupies Asia Minor, stretches into continental Europe, borders on Mediterranean and Black seas	783,562	79,749,461	Turkish; Kurdish	
МК	the Former Yugoslav Republic of Macedonia	In SE Europe	25,713	2,082,370	Macedonian, Albanian; Turkish, Roma, Serbian	
ME	Montenegro	On Balkan Peninsula in SE Europe	13,812	657,394	Montenegrin; Serbian	
RS	Serbia	On Balkan Peninsula in SE Europe	77,474	7,276,604	Serbian; Bosnian, Hungarian, Romany	
AL	Albania	SE Europe, on SE coast of Adriatic Sea	28,748	3,002,859	Albanian; Greek	
BA	Bosnia and Herzegovina	On Balkan Peninsula in SE Europe	51,197	3,879,296	Bosnian, Croatian; Serbian	
ХК	Kosovo UNSCR 1244/99	SE Europe between Serbia and FYROM	10,887	1,836,529	Albanian, Serbian; Bosnian, Turkish, Roma	

Legend: C – Centre, E – East, N – North, S – South, W – West.

Source: *Adapted from* The World Almanac[®] and Book of Facts 2013. New York (NY): Infobase Learning, 2013: Albania p. 748, Austria p. 752, Belgium p. 755, Bosnia and Herzegovina p. 757, Bulgaria pp. 758-759, Croatia pp. 768-769, Cyprus pp. 769-770, Czech Republic p. 770, Denmark pp. 770-771, Estonia p. 775, Finland p. 776, France pp. 776-778, FYROM pp. 801-802, Germany pp. 779-780, Greece p. 781, Hungary p. 785, Iceland p. 785, Ireland pp. 789-790, Italy pp. 791-792, Kosovo under UNSCR 1244/99 p. 796, Latvia p. 798, Liechtenstein p. 800, Lithuania p. 801, Luxembourg p. 801, Malta p. 804, Montenegro p. 807, the Netherlands pp. 818-819, Norway p. 821, Poland pp. 825-826, Portugal p. 826, Romania p. 827, Serbia p. 832, Slovak Republic p. 834, Slovenia p. 834, Spain pp. 836-837, Sweden p. 839, Turkey pp. 844-845, United Kingdom pp. 847-849.

In geographical terms Germany, France, Italy and the United Kingdom as members of EU28 stretch from the North, West and South of Europe to its centre, whereas Turkey is – implicitly as well as explicitly – seen as a bridge between Europe and Asia. All of them have direct access to the sea; in this context particularly the Mediterranean Sea and the North Sea are of their shared interest – recently more intensively displayed e.g. in the

case of Gibraltar that will be briefly referred to later in this article. While both *geopolitics* and *geo-economics* as political geographical dynamics involve processes of managing complex changes through territorial representation – whereby spatialising political-economic processes and struggles – they differ in developing at a time of declining free trade & increasing national autarchy (*geopolitics*), and at a time of increasing free trade & decreasing national autonomy (*geo-economics*), respectively, as M. Sparke and V. Lawson claim.¹⁹

General		Political Perception			Economic Perception		
Cod e	Country	International organisations	Year of EU entry	Governme nt type	Monetar y unit	GDP (USD)	per capita GDP (USD)
DE	Germany *	UN, EU, WTO, NATO, OECD	1952/19 90	Federal republic	Euro (EUR)	3.1 tril.	38,400
FR	France*	UN, EU, WTO, NATO, OECD	1952	Republic	Euro (EUR)	2.2 tril.	35,600
IT	Italy*	UN, EU, WTO, NATO, OECD	1952	Republic	Euro (EUR)	1.9 tril.	30,900
NL	the Netherla nds*	UN, EU, WTO, NATO, OECD	1952	Parliamenta ry democracy under a constitution al monarch	Euro (EUR)	713.1 bil.	42,700
BE	Belgium *	UN, EU, WTO, NATO, OECD	1952	Parliamenta ry democracy under a constitution al monarch	Euro (EUR)	418.6 bil.	38,200
LU	Luxembo urg*	UN, EU, WTO, NATO, OECD	1952	Constitution al monarchy	Euro (EUR)	41.8 bil	81,100
<u>UK</u>	United Kingdom	UN, EU, WTO, NATO, OECD	1973	Constitution al monarchy	Pound (GBP)	2.3 tril.	36,600

Tab 1b Political and Economic Perception of the European Union Context

¹⁹ Sparke, Matthew – Lawson, Victoria. Entrepreneurial Geographies of Global-Local Governance, p. 319 in: Agnew, John - Mitchell, Katharyne - Ó Tuathail, Gearóid (eds.). A Companion to Political Geography. Blackwell Companions to Geography Series. Malden (MA): Blackwell Publishing, 2008.

				ſ	r		
DV	Denmark	UN, EU,	1072	Constitution	Krone	209.2	27 (00
DK	*	WTO, NATO,	1973	al monarchy	(DKK)	bil.	37,600
		OECD			.	102.0	
IE	Ireland	UN, EU,	1973	Parliamenta	Euro	183.9	40,100
		WTO, OECD		ry republic	(EUR)	bil.	,
	G *	UN, EU,	1001	Parliamenta	Euro	298.1	0.6.600
EL	Greece*	WTO, NATO,	1981	ry republic	(EUR)	bil.	26,600
		OECD		J 1	(-)		
	~	UN, EU,	1001	Constitution	Euro	1.4	
ES	Spain*	WTO, NATO,	1986	al monarchy	(EUR)	tril.	31,000
		OECD		······································	()		
	Portugal	UN, EU,			Euro	252.2	
РТ	*	WTO, NATO,	1986	Republic	(EUR)	bil.	23,700
		OECD			· · ·		
SE	Sweden*	UN, EU,	1995	Constitution	Krona	386.6	40,900
012	5 weden	WTO, OECD	1775	al monarchy	(SEK)	bil.	10,700
AT	Austria*	UN, EU,	1995	Federal	Euro	356.5	42,400
лі	Tustitu	WTO, OECD	1775	republic	(EUR)	bil.	42,400
FI	Finland*	UN, EU,	1995	Constitution	Euro	198.2	36,700
L I	Timanu	WTO, OECD	1995	al republic	(EUR)	bil.	50,700
		UN, EU,			Zloty	781.5	
PL	Poland*	WTO, NATO,	2004	Republic	(PLN)	/81.5 bil.	20,600
		OECD			(PLN)	DII.	
	Czech	UN, EU,			Koruna	288.6	
CZ	Republic	WTO, NATO,	2004	Republic			27,400
	*	OECD			(CZK)	bil.	
	Hungory	UN, EU,		Parliamenta	Forint	198.1	
HU	Hungary *	WTO, NATO,	2004	ry		bil.	19,800
		OECD		democracy	(HUF)	UII.	
	Slovak	UN, EU,			Euro	128.5	
SK	Republic	WTO, NATO,	2004	Republic	(EUR)	128.5 bil.	23,600
	*	OECD			(EUK)	UII.	
LT	Lithuania	UN, EU,	2004	Dopublic	Litas	62.4	19,100
	*	WTO, NATO	2004	Republic	(LTL)	bil.	19,100
LV	Latvia*	UN, EU,	2004	Republic	Lat	35.4	15,900
		WTO, NATO	2004	Republic	(LVL)	bil.	15,700
	Slovenia	UN, EU,			Euro	58.6	
SI	siovenia *	WTO, NATO,	2004	Republic	(EUR)	58.0 bil.	29,000
		OECD				011.	
		UN, EU,			Euro	27.7	
EE	Estonia*	WTO, NATO,	2004	Republic			20,600
		OECD			(EUR)	bil.	
CV	Cummic	UN, EU, WTO	2004	Dopublic	Euro	24.0	29,400
CY	Cyprus	UIN, EU, WIO	2004	Republic	(EUR)	bil.	29,400
				Parliamenta	Euro	10.0	
MT	Malta*	UN, EU, WTO	2004	ry	Euro	10.9	25,800
				democracy	(EUR)	bil.	
DO	Domenic	UN, EU,	2007		New Leu	270.6	12 (00
RO	Romania	WTO, NATO	2007	Republic	(RON)	bil.	12,600
L	1	- ,		1	()		

		UN, EU,			Lev	102.3	
BG	Bulgaria	WTO, NATO	2007	Republic	(BGN)	bil.	13,800
HR	Croatia	UN, EU, WTO, NATO	2013	Parliamenta ry democracy	Kuna (HRK)	81.4 bil.	18,400
IS	Iceland*	UN, EFTA, WTO, NATO, OECD	EEA	Constitution al republic	Krona (ISK)	12.6 bil.	38,500
NO	Norway*	UN, EFTA, WTO, NATO, OECD	EEA	Hereditary constitution al monarchy	Krone (NOK)	269.3 bil.	54,200
LI	Liechten stein*	UN, EFTA, WTO	EEA	Hereditary constitution al monarchy	Swiss Franc (CHF)	5.0 bil. (2009)	141,10 0 (2008 est.)
TR	Turkey	UN, WTO, NATO, OECD	candidat e country	Republic	Lira (TRY)	1.1 tril.	14,700
МК	the Former Yugoslav Republic of Macedon ia	UN, WTO	candidat e country	Republic	Denar (MKD)	21.6 bil.	10,500
ME	Montene gro	UN, WTO	candidat e country	Republic	Euro (EUR)	7.2 bil.	11,700
RS	Serbia	UN, WTO (observer)	candidat e country	Republic	Dinar (RSD)	79.9 bil.	10,800
AL	Albania	UN, WTO, NATO	potential candidat e country	Republic	Lek (ALL)	25.2 bil.	7,800
BA	Bosnia and Herzego vina	UN, WTO (observer)	potential candidat e country	Federal republic	Converti ble Marka (BAM)	32.0 bil.	8,200
ХК	Kosovo UNSCR 1244/99	UNSCR 1244/99	potential candidat e country	Republic	Euro (EUR)	13 bil.	6,500

Legend: * Schengen Area; EEA – European Economic Area. Source: *Adapted from* The World Almanac[®] and Book of Facts 2013. New York (NY): Infobase Learning, 2013: Albania p. 748, Austria p. 752, Belgium p. 755, Bosnia and Herzegovina p. 757, Bulgaria pp. 758-759, Croatia pp. 768-769, Cyprus pp. 769-770, Czech Republic p. 770, Denmark pp. 770-771, Estonia p. 775, Finland p. 776, France pp. 776-778, FYROM pp. 801-802, Germany pp. 779-780, Greece p. 781, Hungary p. 785, Iceland p. 785, Ireland pp. 789-790, Italy pp. 791-792, Kosovo under UNSCR 1244/99 p. 796, Latvia p. 798, Liechtenstein p. 800, Lithuania p. 801, Luxembourg p. 801, Malta p. 804, Montenegro p. 807, the Netherlands pp. 818-819, Norway p. 821, Poland pp. 825-826, Portugal p. 826, Romania p. 827, Serbia p. 832, Slovak Republic p. 834, Slovenia p. 834, Spain pp. 836-837, Sweden p. 839, Turkey pp. 844-845, United Kingdom pp. 847-849.

In the framework of territorial scope of our focus among G-20 countries (Germany, France, Italy, the United Kingdom and Turkey) applied earlier in text, English, French, German and Italian enjoy the status of an official language in the EU; English, French and German are employed even as the Union's working languages; and English together with French have the official status in the Organisation for Economic Co-operation and Development (OECD) that embraces countries with a range of per capita GDP as shown in Tab 1b, including Germany, France, Italy and the UK among 21 members out of EU28 as well as Turkey. Just like in the case of the OECD, participation of EU28 Member States varies with respect to the Schengen Area and the Euro Area (even with opt-outs for the UK and Denmark from the latter), too, as documented in Tab 1b. Indeed, prevailing interest of the United Kingdom in rather primary forms of economic integration such as free trade area arrangements was the driving force behind the formation of the European Free Trade Association (EFTA) initiated by the UK on the basis of the Stockholm Convention dating back to 1959 when Turkey applied for associate membership in the European Economic Community (EEC). Now, 1 September 2013 marks 50 years of the Association Agreement (the so-called "Ankara Agreement") aimed at bringing Turkey into a customs union²⁰ with the EEC and, ultimately membership²¹; yet, a detailed account of related geopolitical and geoeconomic aspects is beyond the scope of this article.

Geo-heterogeneity in the Context of the European Union

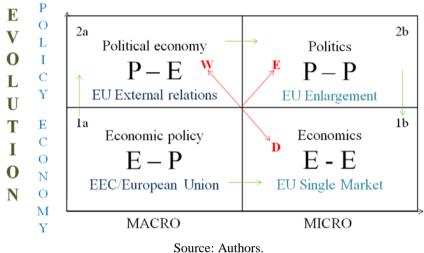
Albeit the terms *geopolitics* and *geopolitical activity* continue to be referred to mainly in association with countries and alliances, and while geopolitical activities in the foreign policy and military context have been indispensable in pursuing interests backed by power, globalisation transformed the concept of geopolitics. Hence, pursuing economic interests is predominant nowadays; geopolitics has stretched out from the (nation) state level to corporate level and capital as a production factor.²² In the first

²⁰ accomplished in mid-1990s

²¹ European Commission website (Enlargement):

http://ec.europa.eu/enlargement/countries/detailed-country-information/turkey/index_en.htm ²² Tomeš, Jiří - Festa, David - Novotný, Josef a kol. Konflikt světů a svět konfliktů - střety idejí a zájmů v současném světě. Praha: Nakladatelství P3K, 2007, p. 15; cf. Hsiung, James C. The Age of Geoeconomics, China's Global Role and Prospects of Cross-Strait Integration. In Journal of Chinese Political Science. (14) 2009, p. 114. DOI 10.1007/s11366-009-9045-y.

part of this article we introduced our illustration of "geo-heterogeneity" with focus on *geopolitics* and *geo-economics* in Fig 1b; now we would like to further explore its application in the context of the European Union (Fig 3a). Fig 3a Geo-heterogeneity in the Context of the European Union: Interactive Matrix



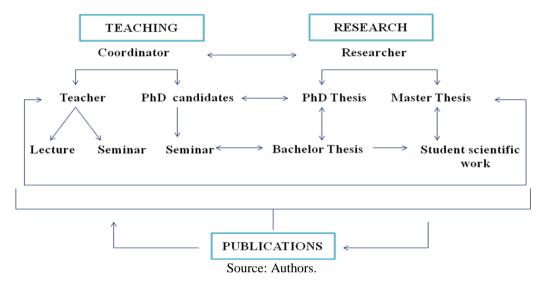
Source: Authors.

In the course of evolution portrayed in Fig 3a, the "European project" (i.e. the European integration process) developed primarily as an *economic* (*policy*) initiative (quadrant 1a) to proceed in three rather parallel dimensions: widening (quadrant 2a in our view as *political economy* of European integration represented by EU external relations); deepening (quadrant 1b in our view as *economics* of European integration represented by the EU Single Market); and enlargement (quadrant 2b in our view as *politics* of European integration represented by EU enlargement). Additional room for interpretation is depicted by vertical and horizontal arrows indicating causality between pure (E-E; P-P) or mixed (E-P; P-E) concepts linked to Fig 1b and even "multiple disciplinarity" referred to earlier in text.

"[I]nterdisciplinary training does not necessarily mean that a person becomes "interdisciplinary", rather that he/she is able to work well with other disciplines, appreciates and has respect for them, and is able and willing to seek them out when there is a need for an another discipline. It is important that an individual working on problems requiring such an interdisciplinary approach has a solid base, a "normal home" in one discipline. However, there is some evidence that this openness to interdisciplinary linkages and approaches becomes more difficult as one moves from a post-graduate to post-doctoral to principal investigator to professorial level Keeping channels of communication open to other disciplines is a continuing challenge throughout a researcher's life." European Union Research Advisory Board: Interdisciplinarity in Research. EURAB 04.009-FINAL, April 2004, p. 5.

As a follow-up to the excerpt from the *Interdisciplinarity in Research* report cited above authors wish to bring attention now to Fig 3b explaining sustainability of interaction between research and teaching related to the context of the European Union as applied by authors.

Fig 3b Geo-heterogeneity in the Context of the European Union: Interactive Cycle



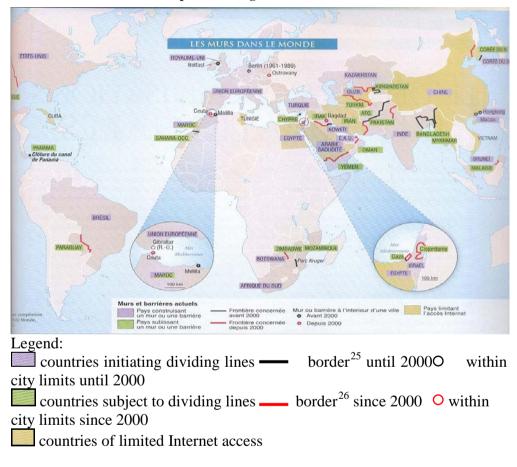
As indicated earlier in this article in the passage devoted to a number of features characterising "geo-heterogeneity", categories such as *geography*, *history*, *culture*, *politics*, *economics*, etc., are in the centre of interest when establishing facts about challenges to status quo: perceptions of their classification vary, with suggestions to organise them in a construction considering the **setting in physical** (*geography*, *economics*) **and societal** (*geography*, *history*, *culture*, *domestic politics/policy*) **terms, and the internal** (*geography*, *history*, *culture*, *domestic politics/policy* & *international politics/policy*) **as well as external** (*geography*, *economics*, *history*, *culture*, *domestic politics/policy*, *strategic issues*) **environment of the occurrence**.²³

Global geostrategic axes in the global geopolitical environment have been determined by strategic routes²⁴ of the flow of raw materials, energy

²³ Adapted from Gourdin, Patrice. Géopolitiques – manuel pratique. Paris: Choiseul, 2010, pp. 569-70; cf. Lacoste, Yves. Géopolitique: La longue histoire d'aujourd'hui. Paris: Larousse, 2009, p. 32.

²⁴ Volner (2010, p. 406); cf. Štandardizácia geografického názvoslovia – názvy geografických objektov z územia mimo SR: Exonymá. Available at: www.skgeodesy.sk/files/slovensky/ugkk/geodezia-kartografia/standardizacia-

sources and goods such as: Panama Canal; Strait of Gibraltar; Gulf of Suez; Gulf of Aden; Persian Gulf; Colombo; Strait of Malacca; Torres Strait; Melbourne; Luzon Strait; Taiwan; Shanghai; Korea Strait; Tsushima Strait; Tsugaru Strait; La Perouse Strait; Bering Strait; Davis Strait; New York; English Channel (La Manche); Skagerrak (Strait); Gulf of Bothnia; Gulf of Finland; White Sea; Istanbul; Batumi; Baku; Ashgabat; Almaty; etc., with their major impact on geopolitical actors further envisaged (Map 1).



Map 1. Dividing lines in the world

geografickeho-nazvoslovia/nazvy-geografickych-objektov-z-uzemia-mimo-sr/ExonymA.pdf & Volner (2012, p. 28).

Cf. Waisová, Šárka a kol. Atlas mezinárodních vztahů. Prostor a politika po skončení studené války. Plzeň: Aleš Čeněk, 2007, p. 24 & Newman, David. Boundaries, p. 123 in: Agnew, John - Mitchell, Katharyne - Ó Tuathail, Gearóid (eds.). A Companion to Political Geography. Blackwell Companions to Geography Series. Malden (MA): Blackwell Publishing, 2008.

²⁶ Cf. Waisová (2007, p. 24) & Newman (2008, p. 123).

Afghanistan, Bangladesh, Botswana, Brazil, Brunei, China, Cuba, Cyprus, Egypt, European Union, Gaza, Hong Kong, India, Iran, Iraq, Israel, Kazakhstan, Kuwait, Kyrgyzstan, Macao, Malaysia, Morocco, Mozambique, Myanmar, North Korea, Oman, Pakistan, Panama, Paraguay, Saudi Arabia, South Africa, South Korea, Tunisia, Turkey, Turkmenistan, United Arab Emirates, United Kingdom, USA, Uzbekistan, Vietnam, West Bank, Western Sahara, Yemen, Zimbabwe.

Source: *Adapted from* Coédition La Vie - Le Monde. L'Atlas des mondialisations. 2010-2011, p. 165.

"S'agissant de géopolitique – étude des interactions entre le politique et le territorial –, l'enjeu est, classiquement, celui de la « défense » du territoire. Et, dans une optique élargie à l'économique, cette notion – comme y invite la géoéconomie – renvoie à celle de l'attrait du territoire pour le développement d'activités génératrices d'emplois hautement qualifiés, d'industries de pointe et de création ou de services à haute valeur ajoutée. Un tel objectif appelle une stratégie de conquête de positions fortes au sein de l'économie mondiale à travers la puissance technologique et la capacité d'innovation – et ceci, dans des domaines de spécialisation pertinents."

Barré, Rémi. Pour une géopolitique de la recherche. GÉOÉCONOMIE, 53 (Les batailles du savoir), printemps (mars) 2010, p. 16.

Conclusion

The European Commission identified open access as crucial for enhancing knowledge circulation, and subsequently, innovation in Europe, with a pilot approach regarding open access to data collected during publicly funded research – while bearing in mind legitimate concerns – as a general principle of *Horizon 2020* as the Union's Research and Innovation funding programme for the period 2014-2020. Findings of a recently released study examining availability of scholarly publications in 22 fields of knowledge in the European Research Area, Brazil, Canada, Japan and the United States of America conducted by the research evaluation consultancy Science-Metrix²⁷ show that in a number of countries and disciplines over 50% of papers are available for free. While free availability of the majority of articles has been registered in the fields of general science and technology, biomedical research, biology, mathematics and statistics, areas with most limited open access availability entail social sciences, humanities, applied sciences, engineering and technology. Arguing that – in the words of the European Commissioner for Research, Innovation and Science Máire Geoghegan-Quinn – the European taxpayer should not have to pay twice for publicly

²⁷ a series of studies covers EU28, Brazil, Canada, the Former Yugoslav Republic of Macedonia, Iceland, Israel, Japan, Liechtenstein, Norway, Switzerland, Turkey and the USA

funded research, all articles produced with *Horizon 2020* funding will have to be made accessible as of 2014 in terms of the so-called *gold* and *hybrid open access* (i.e. immediately online via the publisher), and the so-called *green open access* (i.e. within 6 months via an open access repository by researchers; up to 12 months in case of social sciences and humanities).²⁸

13 July 2013 marked a tercentenary of the signing of the peace treaty between Great Britain and Spain (1713-2013) concerning Gibraltar (Article X) in terms of the Treaty of Utrecht²⁹; following a letter of complaint addressed by the Government of Gibraltar to the European Commission along with an account of recent developments, President of the European Commission José Manuel Durão Barroso communicated to the UK Government and the Spanish Government the matter to be addressed between the two countries concerned in a way that is in line with their common membership in the EU.³⁰ Just like a symposium to be held by the Government of Gibraltar in October 2013 as a platform for debating issues related to the Treaty of Utrecht by a panel of international historians and experts will shed more light into the Gibraltar case, we believe intensified open access policy will open up new horizons to "multiple disciplinarity", and subsequently, prompt new facets of "geo-heterogeneity" in the context of the European Union.

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²⁸ European Commission: Open access to research publications reaching 'tipping point'. Brussels, 21 August 2013, Press release IP/13/786.

²⁹ HM Government of Gibraltar. Treaty of Utrecht is not a bar to self-determination. Gibraltar, 15 July 2013. Press release No. 516/2013.

³⁰ European Commission: European Commission President's phone conversation with UK Prime Minister on Gibraltar. Brussels, 16 August 2013, MEMO/13/747; European Commission: Gibraltar - European Commission President's phone conversation with Spanish Prime Minister. Brussels, 19 August 2013, MEMO/13/750.

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