



Chapitre de livre

2016

Published version

Public access

This is the published version of the publication, made available in accordance with the publisher's policy.

---

## Regional science in the twenty-first century

---

Bailly, Antoine Sylvain; Gibson, Lay

### How to cite

BAILLY, Antoine Sylvain, GIBSON, Lay. Regional science in the twenty-first century. In: Socioeconomic environmental policies and evaluations in regional science. Hiroyuki Shibusawa (et alii) (Ed.). [s.l.] : Springer, 2016. (New frontiers in regional science: asian perspectives) doi: 10.1007/978-981-10-0099-7\_1

This publication URL: <https://archive-ouverte.unige.ch/unige:86970>

Publication DOI: [10.1007/978-981-10-0099-7\\_1](https://doi.org/10.1007/978-981-10-0099-7_1)

© This document is protected by copyright. Please refer to copyright holder(s) for terms of use.

Last deposit update in Archive ouverte UNIGE on 15.03.2023 01:43

# Regional Science in the Twenty-First Century

Antoine Bailly and Lay Gibson

**Abstract** Regional science has been a research field for over 50 years; it continues to enjoy a solid reputation as a useful approach for problem solving for economic, sociocultural, political, and even environmental issues. Its methods, techniques, and perspectives contribute to understandings of regions and of interactions both between regions and within a given region. Its challenge for the future is to fully incorporate new technologies and approaches such as geographic and regional information systems while continuing to be useful to those wishing to evaluate the structure and evolution of established regions and the emergence of new regional identities.

Regional science has been a recognized enterprise for only 50 years, and it is still a young field. W. Isard, the founder, who for more than 40 years had a profound influence on regional science curricula, published a series of fundamental books on methods and introduction (Isard W, *Methods of regional analysis*; an introduction. M.I.T, Cambridge, 1960; Isard W, *Introduction to regional science*. Prentice Hall, Englewood Cliffs, 1975). Regional science was seen as a science of places, locations, and networks. But the discovery in the 1980s, through social and natural sciences, of other possible approaches (Hägerstrand T, *Pap Reg Sci Assoc* 24:7–21, 1973) marked the beginnings of new lines of research that we present in this paper.

**Keywords** Region • Regional science • Regional geography • Regional identities

---

A. Bailly (✉)  
University of Geneva, Rue de la Tour 51, 1867 Ollon, Switzerland  
e-mail: [antoine.bailly@unige.ch](mailto:antoine.bailly@unige.ch)

L. Gibson  
Economic Development Research Program, The University of Arizona,  
P.O. Box 210184, Tucson, AZ 85719, USA  
e-mail: [lvgibson@comcast.net](mailto:lvgibson@comcast.net)

## 1 What Is the Purpose of Regional Science?

Human locations were first seen as a reflection of economic patterns. Recent research widened the scope to take into account human/environmental relationships, cultural patterns through the evolving values of societies (Bailly and Coffey 1994). New regional science raises new questions, not only where, how far, and how much but also who, to whom, how, and why (Table 1). It does not deal with the short term, but with the sustainable in a more global approach.

The new regional science stresses the links between human decisions in space, environment, economic, cultural, and social life, by proposing more global models at the regional level (Gibson 1998; Bailly et al. 1996). New studies deal not only with the impact of distance on location, hierarchies, and centralities but also on actor representations and on environmental consequences of their decisions. Regional science moves into the realm of both the economic sciences and the social sciences and humanities. Its purpose is now to analyze from different points of view the way in which actors group themselves, adapt to their environments, and fight to make use of space in a sustainable way.

Regional science must take into account works in social and environmental sciences; new regional geography using mental maps and GIS, cognitive psychology developing researches on the mutual influences of the people on their environments, humanities studying the role and attachment of place, and environmental sciences developing risk analysis and sustainable development are among these new fields. At a time when new regional communities are emerging, regional scientists are questioning the very foundations of their discipline and their function in societies. What is the region they are studying?

## 2 The Concept of Region

The concept of region is still difficult to define; is it a homogenous area from a physical point of view and can one talk of a natural region? Is it a heterogeneous area with a basic structure such as a river or a fluvial basin? Is it a cultural area based

**Table 1** New questions for regional science

Questions	Concepts	Extension
Who and to whom?	Identities	Social life
	Milieus	Strategies
		Risks
How?	Representations	Quality of life
Why?	Understanding	Powers
	Explanation	Convergence-divergence
		Sustainability

on a common way of life or an area based on a city and its hinterland – a so-called nodal region? In fact, all are regions even if, for a long time, natural regions were the only ones considered by the scientists owing to the dominance of the naturalist point of view. This was the case in the nineteenth century when a “Darwinian” and determinist approach emphasized the influence of nature on mankind. Close relations between environment and people were used to explain life in a region often called “pays.” It was a way to organize the biosphere into regions, by labeling the species and the drawing biome boundaries. This approach was well developed by the German school. The regions were classified, like plants, by their geology, soils, nature, and climate – giving birth to nations of people behaving in a similar way. This type of approach was pushed to its extreme by the National Socialist thinkers to impose German culture in Germanic world, and sometimes elsewhere, since their culture was considered to be superior.

In contrast, the French School of Geography (Claval 1993) at the beginning of the twentieth century was developing a “possibilist” approach. The basis for this was that if there is a natural environment in a region, people can choose from the possibilities to develop their economic, social, and cultural life. The physical environment is just seen as a base for territorial development. Since regions composing France were diversified, each of them could create its own way of life and choose to be part of France despite the physical differences. The concept of landscape was closely linked to this approach. The landscape expresses a natural, social, and aesthetic unity, the intimacy between a culture and a region. Regional landscapes have been shaped by human activity, and a special attention is given to the patterns of forests, fields, and roads, since cultural groups have different ways of settling the land. This concept is associated with the idea of a common human life, a community, building its way of life and its sense of place (Frémont 1976).

This concept was used after World Wars One and Two to reorganize European nations. As an example, each of the Balkan countries was created by uniting a cluster of regions – the underlying hypotheses being that they would share a sense of national unity. History shows us that this was not the case and the word “balkanization” is now used to show a dislocation of territories; cultural regions had more identity than the new nation-states, and this led to ethnic and religious conflicts.

The concept of region, invented in Europe, was also exported in other parts of the world. It had significant effects on the development of regional identities and sometimes separatist movements, as in Québec, for linguistic and cultural reasons. Following the recent growth of sustainability concepts, the regions can be now considered as open spatial systems, with their structures and regulations, men, resources, capital, and know-how, which build forces for regional development organized from the cities.

Regional indicators deal, through geographic information systems (GIS), with environmental variables (global warming, pollutions, etc.), land planning (buildings, places, infrastructures, etc.), and flows (of water, energy, cars, inhabitants, etc.). This very complex reality is integrated in regional information systems (RIS), composed by databases, which can also integrate social values, such as quality of

life indicators and citizen satisfaction criteria. Decision makers can consult the RIS for the monitoring and action processes. The added value of RIS comes from its capacity to present and manage quantitative and qualitative data and to take into account the satisfaction level of the population (preferences, value systems) and the objectives of regional planning. By developing this RIS approach, regional science can focus on sustainability issues at the regional level, in a real strategic planning approach.

### 3 New Regional Identities

Globalization and fragmentation are terms of a new dialectic between the global and the regional. Our relationship with the world has changed. Before, it was local-local. Now it is local-global (Rees 1999). Globalization has made us discover other forms of citizenships, not only the citizen of the world but also the importance of regional identities as we have seen. The forging of regional communities has coincided with the establishment of the world and continental systems. Let just see what is going on in Europe since the rise of the European Union. Scotland is asking for independence from the United Kingdom, and Catalonia is seeking independence from Spain. Russia is moving Crimea and the Eastern Ukraine toward new Russian citizenship. Just to use these examples and those of past Yugoslavia, more than 15,000 km of new frontiers have emerged in Europe since 1990! We are far from the unified world of Montesquieu and Huxley.

Inside the European Union, many of these regions now have representatives in Brussels, to promote their culture and economy. Inside the nation-states, many regions develop marketing policies to attract tourism or firms, on the basis of their landscapes, climate, and quality of life. The competition among regions is as important as the one between nations to get more activities and more wealth. Some economists and regional scientists developed the concept of “milieu” to explain how local authorities, combining political, educational, and entrepreneurial groups, could promote regional attractiveness. The milieu theory, based on regional “savoir faire” (know-how) and control, is used to show the bottom-up potential of regions confronted with the demand of the world economy. Instead of waiting for top-down decisions from multinationals, they create their own economic and social environment to find niches in the world market. French spatial economists call this a “micro global” approach, micro by taking into account the region and its enterprises and global since they are integrated into the world system. Examples of these successful milieus are numerous: the watch industry of Jura in Switzerland, the Third Italy or the shoe and leather industry of Choletais in France, etc. All of these regions have an economic base founded on local entrepreneurship and knowledge and a positive image due to their successes in the world competition.

**Table 2** New citizenships

Regional communities	Nation-states	Supranational communities
For when, why, to what purpose?		
Identities	Nationality	Legitimacy
Convergence	Development	Global concept
Governance	Governance	World system

In all the continents, regional movements are emerging, raising new questions for regional science. Recent regional-national citizenship systems, based on local advantages and governance at the local level, are shaping the political world. New spatial divisions and of their geopolitical implications is at the center of debates in many countries. Questions of identities and citizenship convergence or divergence, autonomy, or federation must gradually be incorporated in regional science (Table 2).

Essential to the notion of new regional identities are flows and linkages. The study of flows and linkages is nothing new for regional scientists, but it might be argued that what is new is the magnitude and the contemporary geographic scale of the flows and linkages are variable. A well-known cliché is “the world is getting smaller.” Whereas this phrase is certainly a cliché, it also appears to be true. Substantial flows of Chinese to California, Arizona, and Mexico; of Japanese to Brazil; of Vietnamese to Texas and California and to France; of Algerians to France; and of Indians to Africa have been recognized for decades. Movements between all settled continents and the cultural changes that come with such movements are familiar topics in both scholarly and journalistic writing.

The reasons for migrations are known and include economic opportunity, reunification of families, flights from war-torn regions, flights from religious and other forms of persecution, and both natural and cultural amenity seeking. Often less well understood are the sociocultural and economic consequences for both the sending and receiving regions and in some cases for regions which fill the gap between origins and destinations.

Intra-regional movements within Europe or within North America have substantial consequences. But perhaps interregional flows such as those that bring populations from places such as Ethiopia, Mali, and Libya to Italy or those from the Middle East to Europe or Australia will have even more dramatic effects. As already noted given the magnitude and geographic scale of movements and the sociocultural and economic backgrounds of migrants, it is easy to imagine that established regional identities will be challenged and that new regional identities will develop over time.

As the world changes, regions are becoming more and more important, so does regional science also, to analyze and answer major geopolitical and economic questions at the regional level and deal in a democratic way with new citizenships.

## References

- Bailly A, Coffey W (1994) Regional science in crisis: a plea for a more open and relevant approach. *Pap Reg Sci* 73:3–14
- Bailly A, Coffey W, Gibson L (1996) Regional science: back to the future. *Ann Reg Sci* 30: 153–163
- Claval P (1993) *Initiation à la Géographie Régionale*. Nathan, Paris
- Frémont A (1976) *La Région Espace Vécu*. P.U.F, Paris
- Gibson L (1998) Institutionalizing regional science. *Ann Reg Sci* 32:459–467
- Hägerstrand T (1973) What about people in regional science? *Pap Reg Sci Assoc* 24:7–21
- Isard W (1960) *Methods of regional analysis; an introduction*. M.I.T, Cambridge
- Isard W (1975) *Introduction to regional science*. Prentice Hall, Englewood Cliffs
- Rees J (1999) Regional science: from crisis to opportunity. *Pap Reg Sci* 78:101–110

**Antoine Bailly** Professor Emeritus in geography and regional science, past Regional Science International President, recipient of Founder’s Medal in 2008 and Vautrin Lud “Nobel” Prize in 2011, and has written 30 books and 300 papers in economic geography and regional and behavioral sciences.

**Lay Gibson** Distinguished Outreach Professor Emeritus, past Regional Science Association International President, recipient of the Association of American Geographers Anderson Medal for work in applied geography, and has written numerous scholarly books and articles and has conducted applied research studies for a variety of private firms and governmental agencies.