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# The Regional Science of Tourism: An Overview

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## 1. Goals of the Special Section

This special guest edited section of JRAP makes the case that regional science should address the topic of tourism, and that tourism specialists and policy-makers, might use regional science methods to better address their policy concerns and understand the impacts and dynamics of their industry. One purpose of this introduction therefore is to explain regional science to tourism practitioners and vice versa. Despite the importance of tourism worldwide and the obvious actual and potential contribution of regional science methods to analysis or tourism policy and management there has been little attention to this topic. The papers in this section cover a range of methods and topics. While they cannot cover all tourism issues or techniques, they have been selected to illustrate a range of contributions. The papers share a common goal -- to bring a practical perspective to the application of regional science.

Our introduction makes three main points:

- 1) A major challenge of contemporary tourism studies is to comprehend the systemic interaction between the smallest entities and regions and the largest.
- 2) While regional science has much to offer in this regard, tourism is a multi-faceted phenomenon and formal analysis must be informed by the perspectives of other disciplines.
- 3) Equally, to be of value to practical policy, requires a specificity of locations, addressed to the issues and interests of their communities and institutions.

The suggestion for a special section of JRAP devoted to Tourism and Regional Science was the recognition that "tourism" broadly defined appears to have many characteristics that could be addressed well by the quantitative methods of regional science. The encouragement came from a small workshop in June

2005 on this topic at the Cornell Hotel Administration School and the Department of City and Regional Planning at Cornell University organized by Sid Saltzman and his then student Tad Hara. The purpose was to discuss the contribution that "Regional Science" might make to Tourism Management and Policy. This led to several sessions with the same title at successive NARSC conferences. While many regional scientists, including the present author, had worked in the area of tourism over the last decades, in the context of their respective regional interests (such as island and rural development), there had been no effort to draw out the relationship in a systematic manner.

The introduction will outline tourism and its complexities, and explain why this topic deserves a broad perspective with contributions and insights from many academic fields, and how regional science can address some of the specific challenges. Apart from its importance as one of the largest industries worldwide, tourism provides a new arena for regional science in its endeavor to analyze small places within the context of a global framework.

## 2. Tourism as a Phenomenon

The United Nations World Tourism Organization (UNWTO 2005) claims that the substantial growth of tourism activity clearly marks tourism as "one of the most remarkable economic and social phenomena of the past century". Their data for international arrivals shows an increase from 25 million in 1950 to some 806 million in 2005, an average annual growth rate of 6.5%, expanding to over 1.6 billion by 2020. The World Travel and Tourism Council (WTTC 2006) expects travel and tourism to generate US\$ 6,477.2 billion of economic activity or 10.3% of total world GDP, and 234 million jobs or 8.7% of total employment in 2006. International tourism receipts combined with passenger transport currently total more than US\$ 575 billion - making tourism the world's number one export earn-

er, ahead of automotive products, chemicals, petroleum and food.<sup>1</sup>

This exceptional growth of tourism since World War II was driven by higher discretionary incomes, smaller family size, changing demographics, lower transportation costs, improved public health standards, infrastructure development, and hospitable environments for tourists (e.g. Smith and Eadington 1992). The UNWTO "Vision," shown in Figure 1, indicates that the same changes in developing countries will shift the locus of tourism growth from Europe and the Americas to Asia. Moreover, domestic tourism, especially in developing countries, is rapidly outstripping international tourism and could soon involve ten times the numbers. Such numbers are the motivation of policy-makers and scholars and practically all books and articles about tourism cite these trends and prospects for the growth of tourism, almost without question. The same is true of local, regional, or national tourism plans. Thus although we argue strongly that tourism policy and tourism scholarship is best considered at a highly discrete local level, and is a dramatically important industry, naïve forecasting and boosterism provide the impetus for much policy and scholarship, including this volume.<sup>2</sup>

Tourism today comprises a complex of activities from the global to the local (Mill and Morrison 1998). The industry includes the full scale of businesses from international hotel chains and major airlines, intermediaries such as travel agencies, to small local accommodation, restaurants, and tour operators, and independent guides and other informal activities. Tours may be packaged (travel, accommodation, sustenance, and entertainment and tours) or independent land-based. Destination offerings also may be organized around cultural heritage or synthetic excitement. Tourists have traditionally been categorized as, for example, explorer tourists, with new categories, market segments, and corresponding tourist products innovated constantly reflecting changing wealth and demographic structures in host and guest countries with demographic (e.g. family oriented, retirees), and tech-

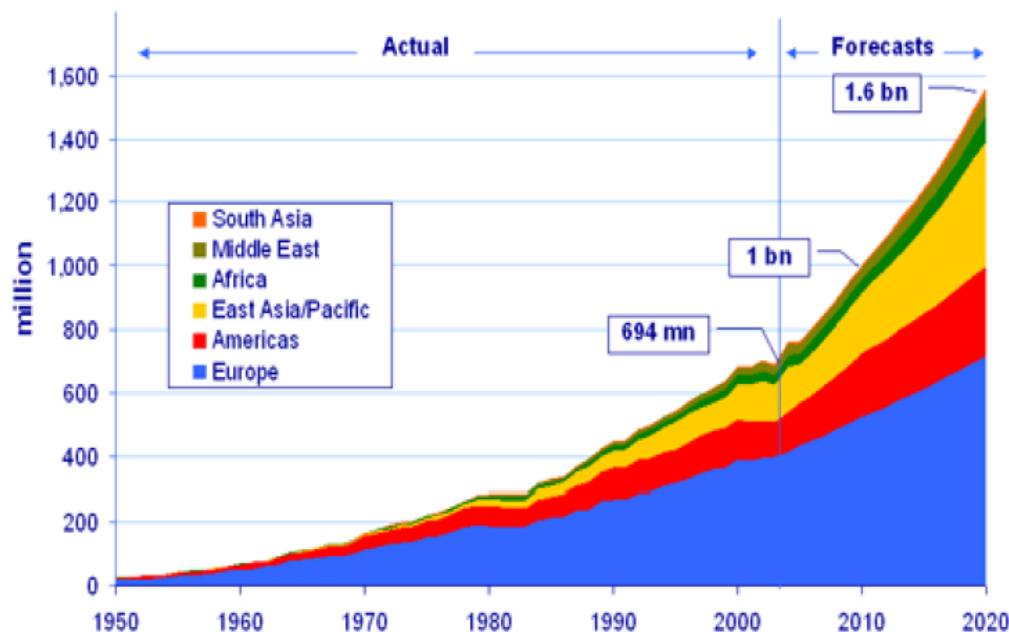
nologies. New technologies have affected the industry from marketing and management (information technology and yield analysis) to individual activities (from paragliding to massive cruise ships) and demographics and income (semester abroad, overseas retirement enclaves), etc. Tourist activities have expanded from "sun, sand and sea" vacations to cover all manner of competitive and recreational sports, education for all ages, nature seeking, health and medicine, novelty and safe adventure, even travel in virtual space. The size and number of tourists, tourist destinations, organizations, and activities has seemingly continued to grow apace. While UNWTO is the designated international organization, UN agencies such as UNESCO, UNEP, ILO and the World Bank adopt a maze of overlapping roles. In addition to national and regional tourism governmental authorities, there are national, regional, and local private organizations such as hotel associations and chambers of commerce and non-governmental organizations from hiking clubs to international environmental groups. Figure 2 illustrates the key components from the global scale of corporations, agencies, and segmented markets to the local scale of communities and specific tourist activities.

Tourism has become a highly sophisticated industry with regularly changing horizontal and vertical alliances between airlines, hotel chains, and entertainment industry (Lunberg, Stavenga, and Krishnamoorthy 1995; Pearce 2001). Corporations each have their own identity and their version of price or quality ranked products, retain flexibility constant redefinition and reorganization, and pay attention to yield management of their product portfolios. The scale of the largest operations - corporations, accommodation, and transportation - has expanded rapidly. Ten chains now own about three quarters of the accommodation in the top-100 chains. Cline (2000) asserts that the hospitality industry is "at the very core of the globalization of international business." He explains the need for growing hotel companies to reach 'critical mass' with the capability of establishing an entire business concept in dramatically different local environments with "organizational structures that integrate individual businesses in one seamless global structure."

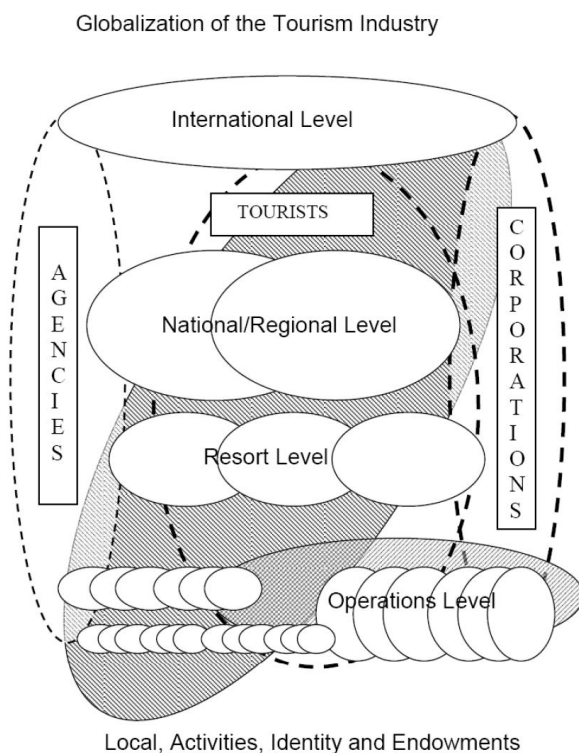
In contrast to global corporations, policy-makers in small local destinations have few options. Whereas larger corporations are able to sustain scale economies for a portfolio of branded products appealing to targeted market segments and diversify their operations and sources of investment geographically, local planners and policy makers have responsibility to a national or community with restricted endowments.

<sup>1</sup> Elsewhere (Cole and Razak 2008, forthcoming) have argued that the assumptions underlying the UNWTO projections are debatable empirically. Contrary to the UNWTO narrative, tourism appears to have become just another "basic" commodity, inelastic over the long run at a global level. Projecting arrivals with growth matching GDP suggests an increase of only 60% over 2006, compared to a doubling in the UNWTO Vision. Aramberri (2008, forthcoming) has questioned implications for UNWTO projections arising from the variability of aggregation assumed by the projections.

<sup>2</sup> There is a belated recognition by UNWTO that "tourism activity at the sub-national level has a very different territorial pattern vis a vis national tourism performance" (UNWTO 2007).



**Figure 1.** International Tourism Past and Future Trends (UNTWO, 2005)



**Figure 2.** Tourism's Global-Local System

They have far fewer opportunities for diversification and many competitors among neighboring and new

resorts with similar endowments appeal to the same clientele (Johnson and Thomas 1992). Moreover, the smaller, the more remote, and poorer a destination is, the greater is the likelihood that trends will be quite different from the national average, and the greater will be the short- and long-run variability and vulnerability to fluctuations. Nonetheless, with globalization has come the counter-realization by tourist destinations and tourism scholars of the importance of localization and the idea that the uniqueness of place and the specificity of production provides the best opportunity whether through heritage, innovations in market niches and marketing, and economic structures (Smith and Eadington 2002). Whether any given "small place" relies on large international corporations or its own "uniqueness" as the basis for tourism requires a comprehensive understanding of its resources, structure, and dynamics.<sup>3</sup>

<sup>3</sup> It is widely recognized that package tours and international chain hotels have a far higher "leakage" share of expenditures overseas than transient locally owned operations. Thus, an expensive vacation in a luxury hotel may result in less total local income than a less expensive vacation in a smaller hotel. It is widely acknowledged also that the economic benefits of tourism, and of different kinds of tourism, are distributed quite variable across different classes of households (whether by residential status), entrepreneur (whether local or expatriate), or skill (education and training), and similarly with environmental impacts of different types of tourism (Cole 2003).

The enormous growth potential of tourism globally offers opportunities to many remote places but also poses tremendous challenges (Johnson and Thomas 1992; Apostolopoulos and Gayle 2002). That tourism most intensively engages relatively small regions, and that it feeds off “authentic” natural and cultural experiences they offer means that it places considerable pressure on these fragile resources. Whether, destinations are actively engaged in eco-tourism (broadly defined to include adventure-, nature-, and alternative-tourism) most express concern for their sustainability, natural endowment, and carrying capacity (again broadly defined). Anthropologists, social geographers, environmental scientists, and development economists have been especially critical of tourism. Smith and Eadington (1992, p3) relate how disillusionment with “mass” tourism and the many problems it has triggered has led many observers and researchers to criticize vociferously the past methods and directions of tourism development. They offer instead the hope that “alternative tourism”, broadly defined as forms of tourism that are consistent with natural, social, and community values, will allow hosts and guests to enjoy positive and worthwhile interaction and shared experiences. This challenge is hardly confined to destinations in developing countries. Much the same critique and goals applies to tourism anywhere, especially in small communities, islands, rural areas, and inner-city neighborhoods (Chambers 1997; McElroy and de Albuquerque 2002; Gotham 2005). Marcouiller (1997), for example, has argued that tourism planning should account for socio-cultural and environmental impacts within a broader regional development goals and objectives. This prescribes the major challenge for regional science addressed in this special issue.

### 3. Regional Science Potential for Tourism

As the founder of Regional Science, argued Walter Isard, “The region has its own ‘essence’ which can be grasped in full only by tools, hypotheses, models and data processing techniques specifically designed for regional analysis.” (Papers and Proceedings of the Regional Science Association 1956). Definitions of regional science range from “the adoption of rigorous and systematic methods and techniques in the analysis of problems and “analytical approaches to problems that are specifically urban, rural, or regional”. In the broadest sense, any social science analysis that has a spatial dimension might be embraced by regional scientists, recognizing that increasingly regional science concerns itself with the sub-regional (the firm or the community), the national and, increasingly, the global region.

Many regional scientists wear at least two academic hats within their scholarly environment – notably geography, economics, and planning, and others employed in planning and policy agencies. Some use regional science as a means to hone their skills and techniques while for others it appears as an escape from the institutional reality of society, policy-making, and departmental politics.

For many years tourism was not considered a respectable field of scholarship among social scientists – a “frivolous” topic (Smith and Eadington 1992). This reflects the tendency in regional science to prioritize manufacturing above services, or planners to prioritize urban above rural and so on. Instead, the hospitality industry developed its own scholarly agenda oriented to serving the particular needs of businesses directly concerned with tourism and its promotion. Thus, there is something of a dichotomy between hospitality management, and the mainstream disciplines. However, as Wall in this issue exclaims, “Tourism is too important to be left to tourism specialists.” More recently, several disciplines, notably geography and anthropology, economic, and political science, psychology and history have paid greater attention to tourism (Marcouiller 1997). Each of these disciplines has adopted its own perspective – geography seeking explanations of the spatial evolution, anthropology exploring the relationship and mediation between hosts and guests, economists quantifying the income and employment impacts, psychologists seeking the motivations for recreation and travel, and more recently, ecologists studying the environmental impacts. Crick (1989) points out that no single discipline can aspire to address all the facets of an industry as complex and dynamic as tourism, nor draft a single theory. Nonetheless, it is probably fair to say that hospitality management as a discipline has a far greater direct influence on tourism planning and policy at all levels than all other disciplines combined.

In contrast to regional science, geographers have contributed greatly to the study of tourism (Pearce 1987; Hall and Page 1999). Thus, from the standpoint of tourism studies, regional science is best viewed as a sub-discipline of geography both because a) geographers have been especially active in laying the foundations of tourism studies, and, b) geography as a discipline successfully embraces a wider range of disciplines, contextual issues, and ideological orientations, and methodologies than does regional science. They are best able to explain the advances and shortcomings of tourism policy and theory in terms that are recognizable to regional science. Nonetheless, some of these concerns may be well addressed by established regional science approaches of spatial and structural

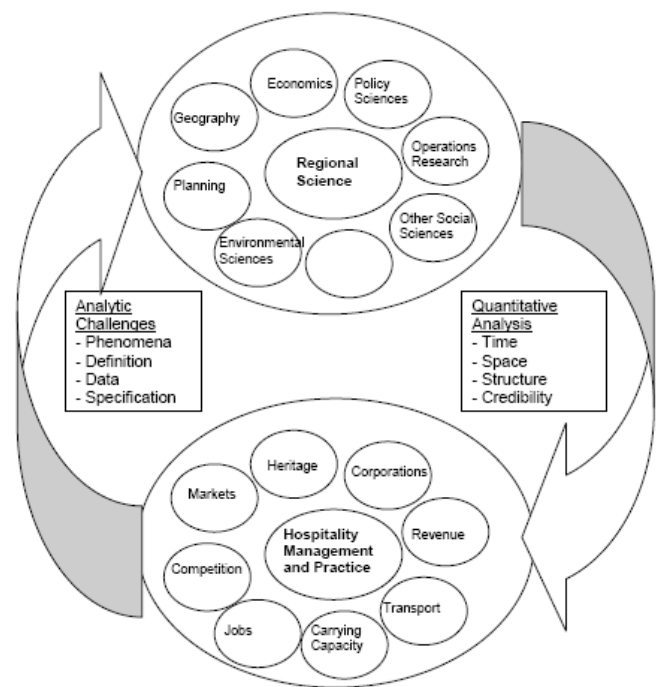
analysis, and by institutional and business economics and more dynamic emerging techniques that are more recent to the regional science toolkit. Isard in his 1997 article “Perspectives of a Political Geographer on the Future” in considering the space-time paths of many units and aggregates asserts that regional scientists must address the changing spatial milieu from a continued building up of hierarchies of all sorts, whose rates of construction are unpredictable, with mounting specialization, increasing scale, spatial juxtaposition, and agglomeration economies. This summarizes the story of tourism well.<sup>4</sup>

In terms of what it does address, regional science has become sub-divided into so-called “topics” such as location theory or spatial economics, transportation modeling, migration analysis, land use and urban development, inter-industry analysis, environmental and ecological analysis, resource management, urban and regional policy analysis, geographical information systems, and spatial data analysis. In focusing on their common methodological challenges, regional science embraces fields as diverse as economics, agricultural economics, public policy, urban planning, civil engineering, geography, finance, environmental management, and demography, and as such aspires to be an interdisciplinary endeavor.

Plausibly we might define regional science as those academics and others who attend regional science conferences, and publish in regional science journals – that includes the above, as well as trained regional scientists. If there is an apparent common denominator, it is a devotion to definition, quantification, and algebra. Just as painters are drawn to paint and performing artists to perform, regional scientists must crunch numbers. The raw material of this endeavor is real-world systems, potential to theorize and model, good data, and (in the modern academic world) funding and other resources. With this more sanguine view, the place of Regional Science within the constellation of disciplines and tourism studies and practice might appear as Figure 3.

Given this scope, there are several reasons why regional scientists should consider “tourism” as an area of study.

- 1) **Importance:** Tourism today has become one of the largest industries in the world, and one of the fastest growing. Few nations and communities are not contemplating investing in tourism to promote their future development.
- 2) **Regional:** Tourism is a regional activity at all scales, from the clustering of small businesses and the segmentation of niche markets to the global operations of major chains, airlines, and international organizations.
- 3) **Fields and Topics:** Most, if not all of the fields, demography, employment, taxes, that regional scientists study are of importance to tourism analysis, directly or indirectly.
- 4) **Issues:** There are many questions on both the public policy and the business sides of the industry, that can be addressed by the spatial, temporal, and structural methods that have been developed by regional scientists over the last half century.
- 5) **Disciplines:** Addressing regional science to the study of tourism could foster aspirations to become an integrative discipline.



**Figure 3.** Regional Science Constellation of Disciplines and Tourism Constellation of Issues

<sup>4</sup> Isard articulates that future geography must consider “the space-time paths of individuals, groups, species, organizations, institutions, communities, regions, nations, cultures, the international system – and even ecological systems, the planet, the Milky Way, galaxy systems, and the universe, to mention only some of the very many units or aggregates one might consider.” While space-tourism is not a topic of this volume, we are reminded that tourism has already entered the space age.

- 6) **Data:** Because the industry is quite carefully monitored (rooms, arrivals, expenditures, and so on) there are empirical opportunities to test existing and new theories specific to tourism, and integrated theories interfacing with demographic, macro-economic, and environmental systems.
- 7) **Theory:** The topic lends itself to new theoretical and analytic challenges, especially the global-local dichotomy, evolutionary and complexity theories and agent-driven models. The challenge of how to comprehend the inclusive in terms of the individual and dynamic trends in terms of discrete actions.
- 8) **Resources:** As a growing industry worldwide, especially in rapidly developing regions, the field provides an increasing number of opportunities for research funding.
- 9) **Need:** In the American academy the majority of tourism research is undertaken in hospitality management schools dealing with the micro-economics of the industry. Thus, there is a real need for public policy-oriented analysis

At first blush, tourism, as a topic for study through regional science might be a marriage made in heaven. Insofar as tourism is formally defined a component of the "service" sector, one is struck by its potential, especially with respect to availability of data. Here, one is struck by the (unpublished) keynote presentation by Bowers at the 2005 NARSC Seattle cataloging the difficulties of studying the services sector, mentally ticking off the issues where it appeared that headway could be made using tourism as an exemplar. One reason for this is that so many tourist destinations are small countries and islands for which cross-border flows of people as tourists or workers, of finance as spending or repatriation, as well as goods and other services are measured. Moreover, the industry has developed its own metric for measuring, evaluating, and comparing its characteristics and performance.<sup>5</sup>

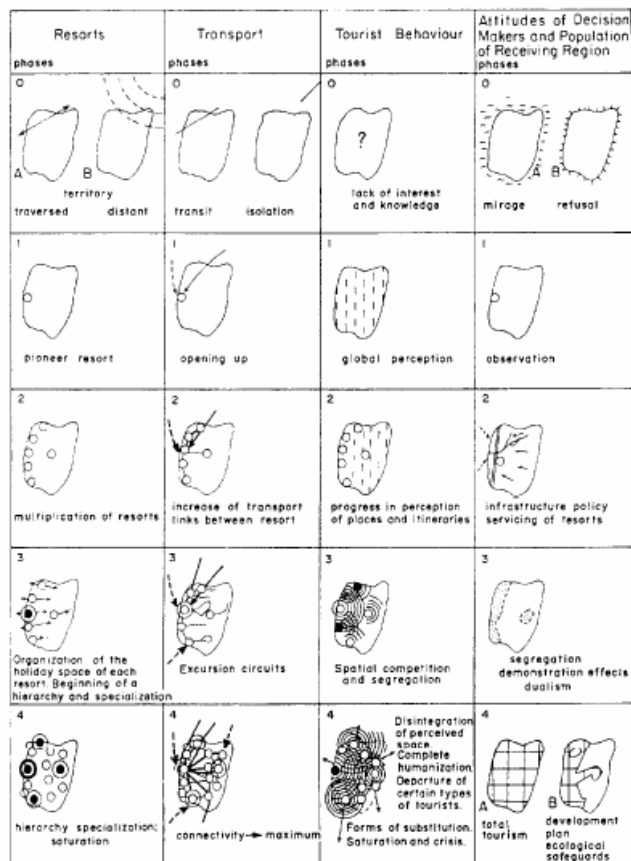
<sup>5</sup> The suggestion in his paper that tourism offers comparatively rich data, does not mean that these should not be carefully scrutinized. For instance, for contemporary statistical purposes, tourism is defined as traveling for less than one year for leisure, business, or other purposes, domestic tourism is variously defined as "recreation more than 50 miles from home" or including an "overnight stay", international arrivals are the head count at international airports, accommodation is measured by rooms. Obviously, such definitions are problematic when frontier measurements cease (as with the EU) or new nations emerge, or when tourism is between large neighboring regions, or when stay-over days vary or visitors make multiple

From within the field of tourism scholarship, the state of research appears somewhat less rosy. In terms of the geography of tourism, leading scholars have repeatedly called for a more sophisticated analysis. In 1988, Pearce observed the lack of theoretical methodological sophistication and lack of a strong theoretical base. More recently, Pearce (1999) noted that, while the growth of tourism has been accompanied by a significant increase in research and scholarly activities (with journals and tourism programs), this growth has not been matched by an increase in the quality of research in the field. Not only is there a need to study tourism further as new issues and problems arise and the sector increases in magnitude and significance – socially, economically, environmentally, and politically – but there is also a need to understand the phenomenon better through better quality research.

As early as 1976, Miossec sketched the temporal relationship between key factors in the then growing phenomenon of mass tourism – tourists, transport, and a resorts resources, community, and policy. The phases of development as portrayed in Figure 4 are easily related to subsequent resort life cycle and similar theories of Butler (1980), Lundberg (1980), and others. Indeed, Pearce (1989) deemed this to be still the clearest and most explicit conceptualization of tourist development. Arguably, it captures many of the challenges for formal structural and dynamic modeling by regional scientists today.

Summarizing the challenges of contemporary tourism development Pearce (Pearce and Butler, 1999) argues that the seeming relentless growth of tourism will continue to create new issues in tourism and reinforce the importance of others that have been apparent for some time. In consequence research needs – both qualitative and quantitative will grow. Greater theoretical understanding must be matched by improved methodology and practical implementation. Ioannides (2006) too, concludes that economic geographers have failed to bridge the conceptual gap between economic geography and tourism research. Butler (2008, forthcoming) explains why few of the approaches used to predict the future nature and scale of tourism are effective or accurate. This is due in part to the heterogeneous nature of tourism demand and supply, and the variety of external agents. The confused pattern of tourism development and growth illustrates a major dichotomy between the dynamism and inertia of tourism – hence the difficulty in predicting future patterns. Interestingly, this conclusion echoes Miossec's (1976) commentary that the elements he identifies need not

entries. See e.g. Lundberg et al (1995) for limitations of tourism industry statistics.



**Figure 4.** The evolution of tourist regions and structure through space and time (Miossec 1976).

develop apace and therein lays the source of many of the problems to which tourism may give rise (Pearce, 1989, p18). Butler argues for a blending of both evolutionary and revolutionary predictions and incorporation of ideas such as chaos theory and chance into the equation of growth, in order to reflect both the inertia and dynamism inherent in tourism.

With regards to the structural issues of tourism Johnson and Thomas (eds. 1992, Chapter 1) in "Perspectives on Tourism Policy" concluded, prematurely (from the perspective of this paper), that the methodology of economic impact studies of the conventional kind are fairly well developed. In contrast, Judd (2006), for example, observes that "current definitions of the tourism industry obscure rather than reveal the linkages and relationships that, when taken together, add up to a recognizable system of (tourism) production". They are ambiguous about the businesses included and the proportion actually consumed by tourists. Similarly, d'Hauterresse (1995) observes that linear relationships (such as those in commodity chain analysis) have weaknesses since relationships between enterprises are multi-scalar, and are embedded in a

local and global network and do not account for constant innovation of new products, and production methods. The UNTWO, latterly in cooperation with the WTTC, EU and OECD, have advocated the idea of tourism satellite accounts (TSA) as a way of including details of tourist sector activities into national accounts, and even sub-national accounts (primarily within Europe).<sup>6</sup> The US Commerce Department too has established TSA for the United States.

#### 4. Tourism in Practice

Isard himself has sought to broaden the scope of regional science well-beyond the formulaic, and has stressed the importance of not simply applying regional science to policy issues, but also ensuring that policy takes account of the findings and prescriptions of regional science. Unfortunately, this is one challenge that regional science has failed to meet. A candid assessment by Macke and colleagues (2003) in an earlier volume of the *Journal of Regional Analysis and Policy* complained that despite the revealed interest of regional scientists in policy, and even the widespread adoption of some findings, there is a growing gap between regional science research and the policymaking process. The continued implementation of potentially dubious policies suggests that our work is not always having an effect. Instead, regional policy often seems to flow straight out of think tanks, often with a political agenda; rather than from the academy or regional research centers. "Simply put, researchers and practitioners in our field are often bypassed."

Tourism planning in small localities and communities, whether in metropolitan or developing regions, presents an enormous challenge. Many small places in the US, for example, exercise "home rule" rejecting zoning regulations, pay lip service to experienced consultants, and abhor academics with fancy models. Yet much rural tourism planning relies on marketing, promotion, and regional boosterism to attract visitors and entrepreneurs (Marcouiller 1997). The cultural

<sup>6</sup> The aggregation for the accommodation sector is strange, given that data are collected by the industry, international organizations (consulting firms and regional agencies), and most tax authorities on the performance and expenditure structure of accommodation broken down by size, quality, locale, transient versus timeshare versus all-inclusive, local or chain-operated, and so on. It is widely acknowledged that there are major differences between these categories and much policy and scholarly debate over their relative contribution to a destination. The WTTC accounts although based on an enviable data base, appear to be primarily driven by the need to demonstrate the importance of the industry by emphasizing the downstream, or multiplier effect, or tourism (WTTC 2006).



norms of populations in rural areas, islands, and developing communities generally contrast with those implicit for the policy arena in much regional science and statistics. Considerable skill – generally one that is not taught in regional sciences' core disciplines is required to elicit the reliable "data" or reveal aspirations and tolerances. The institutional model is quite different from that assumed by the regional science community at large.

As an identifiable scholarly niche, regional science can contribute to tourism policy – but only provided it addresses the concerns of policy makers and communities, and it makes the effort to bridge to these interests and to the findings and methods of other disciplines. Tourism analysis is highly contextualized and cannot be usefully discussed outside its cultural, systemic, and policy context. While it is possible to envisage a potential application of every regional science topic or method to the subject of tourism, the concern should not simply be to looking for problems to apply a method, but a problem identified by the host community where methods that are more sophisticated might help to explicate the issue.

For this reason, the selection of papers draws on practical experience of authors with tourism policy or efforts to explain where and how regional science techniques might contribute to practice. In this respect, the issue will hope to go beyond introducing the topic of tourism to regional scientists, or merely demonstrating the value of methods for tourism studies.

## 5. Papers in the Special Section

The first papers by Wall and Razak provide a context for tourism planning focusing on the requirements for sustainability in small islands.

The introductory paper by Geoffrey Wall, 'Insights on Tourism from a Chinese Research Agenda,' begins by explaining the fragmentation of tourism among operations of differing sizes and products, including transportation, tourist attractions, accommodations, food and beverage suppliers, and souvenirs, and critiques the industry's overly narrow focus on tourism management and relative neglect of other aspects of tourism. He explains that because tourism's relationships with agriculture, forestry, mining, environmental protection and other activities involve competition for scarce resources, an overly narrow focus does not do justice to the wide variety of interrelated concerns or ensure that policies designed to sustain tourism contribute to sustainable development. Wall then catalogues insights from a long experience into some of the complexities of tourism research using the Chinese island of Hainan as his "laboratory" for several

projects. The focus of the first project was on coastal zone management with the overall objective of enhancing the capabilities of the provincial government in Hainan to manage the growing pressures on its coast, including that arising from tourism. Wall explains how inland activities on the island impacts the coastal tourist areas. He concludes by discussing the relevance of these findings to other parts of China and, indeed, to many parts of the world.

In her contribution, 'From Culture Areas to Ethnoscapes: An Application to Tourism Development,' Victoria Razak explains the importance of social science perspectives from anthropology and cultural geography for the study of tourism, especially that proposed for peripheral areas, such as rural communities and remote islands preoccupied with themes based on "heritage" and "authenticity". She begins by reviewing concepts of spatial configuration, especially those of the culture area, and *kulturkreise* (culture circles), cultural landscapes, and *ethnoscapes*. She considers how these can provide useful tools for tourism planning. Using a case study from the Caribbean, she shows how these concepts were adapted to develop new regions and tourism products based on culture history, traditions, and way of life for the diversification and expansion of tourism. Razak's paper provides a context for tourism impact studies by explaining through theory and example how both region and products might be delineated, thus providing a more credible basis for analysis of tourism policy.

The second group of papers examines the comparative impact of particular tourist activities, such as casinos and agri-tourism in the United States using novel variants of input-output and social accounting analysis.

In their paper, 'The Regional Impact of Promoting Agritourism as a Sustainable Strategy for Rural Economic Development,' Yuri Mansury and Tadayuki Hara employ a general equilibrium method to evaluate and quantify the impacts of introducing organic food-driven agri-tourism into an economically distressed rural community, Liberty, in Upstate New York. The organic food industry recently has experienced rapid and sustained growth, and yet this segment remains largely unexplored as the focus of a tourism-driven strategy to promote regional economic development. To evaluate the efficacy of such strategy, they carry out a counterfactual simulation in which agri-tourism promotion results in the deepening of the inter-sectoral backward linkages, and then compare the impacts on output, employment, and income distribution with those derived from the original data.

Casinos have become one of the major tourist development types that prompt controversies across the

United States and in many other nations. The contribution by Daniel Monchuk, 'People Rush in, Empty Their Pockets, and Scuttle Out' evaluates county-level economic growth impacts of casinos along waterways in six US states over the years 1995-2002. His conceptual model describes the equilibrium and growth conditions from which reduced form growth equations are derived and subsequently used to direct empirical estimation. Using county level data, he estimates the impact of casinos on population, employment, and county income growth. Monchuk's conclusion is that counties with a casino opening after 1995 had a negative impact on aggregate county income while the effect on employment growth was positive. Casinos did not appear to significantly affect population growth. Moreover, casinos established prior to 1995 did not have a marked impact on any of the three growth indicators.

Peter Burnett, Harvey Cutler, and Ray Thresher, in their paper 'The Impact for Tourism for a Small City: A CGE Approach,' use a data intensive general equilibrium model to examine tourism at the small city level. They explore the question of whether tourism should be used as a method to stimulate economic growth or to change the structure of the economy to increase the efficiency of collecting tax revenues. They consider alternative uses of land to determine whether tourism is an optimal use of land, and the role of household migration and commuting in determining economic outcomes.

The paper by Daniel Freeman and Daniel Felsenstein, 'Forecasting Regional Investment in the Hotel Industry,' uses a multi-regional Input-Output approach to tourism in Israel. They observe that the tourism industry suffers severe shifts in demand making the forecasting of large-scale initial capital investment in the hotel sector especially difficult. Using a detailed multi-regional input output model (MRIO) augmented by an investment matrix, they estimate the demand 'push' that can stimulate the hotel sector into new investment and the extent to which this response is regionally differentiated. Their model predicts regional rates of return and capacity coefficients to hotel investment for four classes of hotels in the six regions of Israel and the results compared with reported rates of return.

The last group of papers by Li Yin and Sam Cole focus on the dynamic aspects of tourism development.

Li Yin describes 'An Agent-based Simulation of Resort Town Housing Market' and applies this to Breckenridge, Colorado. Her study uses agent-based models to simulate housing choices of second homeowners and local residents on their responses to amenities and job accessibilities, and simulates how local

residents respond to second-home owners' choices. Li observes that understanding the dynamics of amenity-led development is a necessary prerequisite to rural tourism planning and that agent-based models provide a framework in which individuals and their behaviors in relation to the system environment and other individuals in a system can be modeled in a more direct and realistic way. Li considers that how many rural communities are experiencing rapid in-migration and economic growth due to their natural and built amenities, such as recreational sites and scenic beauty, but that this rapid growth escalates housing and living expenses, and drives local residents and service workers away.

Sam Cole, in 'Beyond the Resort Life Cycle: The Micro-Dynamics of Destination Tourism', examines the dynamic issues of tourism growth in small island economies. He sets discussion of a discrete choice model against the historical record over half a century of two small but contrasting Caribbean island destinations, Aruba and Barbados. Four elements come together in the formal model; lumpiness of investment, delays in marketing and construction, distribution of expenditures between the local and overseas components of tourism, and scale-related economies and constraints. The model indicates how the stages of growth, as defined by the resort life-cycle model may result from a combination of elements, public policy and investor mindset, scale of investment, and transnational involvement, and their response to competition through globalization.

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