ABSTRACT

Pearce, Douglas G., "Towards a Geography of Tourism." Annals of Tourism Research, July/September 1979, VI(3):245-272. This paper traces the development of geographical interest in tourism during the past half century and examines the range and scope of the geography of tourism. The available literature is reviewed and suggestions are made regarding possible research avenues and theoretical developments. Six major areas of interest are identified: spatial aspects of supply, spatial aspects of demand, the geography of resorts, patterns of movements and flows, the impact of tourism, and models of tourist space. Through an emphasis on spatial interaction an attempt is made to provide some cohesion and synthesis for this body of knowledge which constitutes the basis of the geography of tourism. Keywords: geography, spatial processes, demand, supply, flows, resorts, impact, models.
INTRODUCTION

It is now almost fifty years since geographers were attracted to the study of tourism (McMurray 1930, Jones 1933, Miege 1933). It was not until the early 1960s in Europe and more recently in North America and elsewhere, however, that geographical studies of tourism start to appear frequently in the literature. Other tangible evidence of the growing geographical interest in tourism is provided by the International Geographical Union’s establishment of a working group in tourism and recreation in 1972 and by the prominence of geographers (mainly European) in the membership of the Association Internationale d’Experts Scientifiques du Tourisme (AIEST). Although such bodies have brought some order to the field, much effort has been expended with little direction and numerous fragmented studies have appeared (Mitchell, 1969). Consequently even after half a century, it is difficult to speak of the geography of tourism as a subject with any coherence within the wider discipline of geography or in the general field of tourism studies.

The purpose of this paper is to examine the range and scope of the geography of tourism. The available literature is reviewed and suggestions are made as to possible research avenues and theoretical developments. Attention is directed at both content and approach. Through an emphasis on spatial interaction an attempt is made to provide some cohesion for a body of knowledge which might be defined as the geography of tourism. The review concentrates on published work by geographers or studies appearing in geographical literature. Although a wide range of material is drawn upon here, an article such as this cannot hope to be exhaustive. The author is particularly conscious of the existence of much material to which access has been
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limited by language difficulties. Matley (1976) suggests that "it is no exaggeration to say that over three-quarters of the significant publications in this field (of international tourism) are in German, French, Italian, Russian and East European languages." Nevertheless, it is felt that the references and research cited are representative of the main trends in the field and it is hoped that for geographers this paper will clarify some of the issues and stimulate further interest in the "inviting possibilities" for research in tourism which were emphasized by Brown (1935). At the same time, the paper attempts to give non-geographers an appreciation of the contribution of geographical research to the broader field of tourism studies.

DEVELOPING GEOGRAPHICAL INTEREST IN TOURISM

Early American geographers saw tourism as a distinct and significant form of land use (McMurray 1930, Brown 1935). The few studies published in the 1930s and 1940s tended to concentrate on the economic aspects of tourism (Carlson 1938, Deasy 1949), although some writers recognized that tourism modified the existing landscape and gave rise to new and different urban forms (Jones 1933, Eiselen 1945). Cooper (1947) suggested a broad classification of tourism by season and motivation. Some attention was also directed towards tourism outside of North America. Selke (1936) examined the influence of various physiographical and cultural features on tourism in Germany. He also foreshadowed the writings of that country's influential geographer, W. Christaller, in concluding that "the tourist trade utilizes areas which would otherwise not contribute to the land's total wealth." Later, Spencer and Thomas (1948) discussed the distribution and location of hill resorts in the Orient.

The main contribution from Britain in this early period was Gilbert's work on the morphology of inland and seaside resorts (1939, 1949). In France Miege (1933) had laid the foundations for the many regional studies which were to follow later with his substantial discussion of tourism in Savoy. According to Miege, tourism had a twofold interest for geographers; it involved the movement of people and constituted a regional resource. The most significant German prewar study was by Poser (1939). He examined the distribution and locational attributes of various forms of tourism in the Reisengebirge.

Since the early 1960s geographers have become increasingly concerned with the nature and place of tourist geography, both in prefacing their own writings and in general reviews of the subject. That different views exist is not surprising given a multitude of geographic approaches and the varied definitions of tourism. Nevertheless some general consensus does emerge. European geographers in the mid 1960s generally agreed that the geography of tourism was mainly concerned with the spatial differentiation of tourism and the recognition of general regularities in its occurrence (Juls 1965, Jacob 1966, Ritter 1966, Merlini 1968). This involved an examination of both the ways in which the location and distribution of tourism was influenced by different physical and cultural factors and of the manner in which the landscape was modified by tourist development. The practical application of this research was to be able to recognize new areas suitable for tourism. The appreciation of the tourist potential of different regions was also stressed by Gonzalez (1974). He, however, limited the scope of tourist geography essentially to an analysis of the "geoturistic values" of a given area. Cribier (1971) adopted a much broader stance, suggesting the geography of recreation or tourism studies all the relationships which
exist between man and those environments, physical and cultural, frequented for leisure purposes.

Other writers have sought to define the place of the study of tourism in the field of geography. The general thrust of early American writings led to the classification of "recreational geography" as a branch of economic geography in the 1954 review of the discipline in North America (McMurray 1954). Christaller (1955, 1964) also considered the geography of tourism as a subdivision of economic geography. He saw tourism as an economic activity characterized by its peripheral location and by its avoidance of central places. However as the number and range of studies increased (Wolfe 1964), so subsequent writers saw tourism research extending beyond the bounds of economic geography to embrace aspects of just about every systematic branch of the discipline (Murphy 1963, Gallardo and Cervera 1969, Mercer 1970, Matley 1976, Robinson 1976, Singh 1978). These writers see tourism as being of interest not only to economic geographers but also to physical geographers because of its dependence and impact on physical factors, to population and transport geographers as it involved the movement of large numbers of people from one place to another, to settlement and urban geographers as tourist developments modified existing patterns or gave rise to new forms, to social geographers concerned with impact....This all encompassing view is summed up by Matley:

There is scarcely an aspect of tourism which does not have some geographical implications and there are few branches of geography which do not have some contribution to make to the study of the phenomenon of tourism (1976:5).

Recognition of a particular aspect of tourism as a germane field of study does not necessarily imply voluminous research on that topic, however (Mercer 1970). The relationship between climate and tourism, for example, has long been recognized, yet few geographers have dealt specifically with this topic (Perry 1971, Roucloux 1976, Mings 1978). Likewise, Stansfield (1971) laments the lack of attention given by urban geographers and others to resort towns. More importantly, this rather piece-meal approach whereby various aspects of tourist research are attributed to different branches of geography serves to enlarge the realms of the existing systematic subdivisions rather than lead to a new and distinct branch of the discipline, that is, the geography of tourism in its own right. A direct consequence of this is the lack of cohesiveness and the fragmented nature of much tourist research noted earlier. What is now needed is "a synthesizing approach to the problem as a whole" (Yefremov 1974). Such an approach should lead to greater direction in tourist research by geographers by emphasising more clearly the multi-faced nature of the phenomenon and identifying more explicitly the numerous and varied inter-relationships within tourism.

The focus for a synthesis of the geography of tourism is perhaps found in the nature of tourism. Tourism has been variously defined but may be thought of as the relationships and phenomena arising out of the journeys and temporary stays of people traveling primarily for leisure or recreational purposes. The duration of these stays may vary. For statistical purposes a four-night minimum is commonly accepted for a domestic holiday but stays of only twenty-four hours are universally recognized in the case of international tourism. The geography of tourism is concerned essentially, though not exclusively, with the spatial expression of these relationships and phenomena.
The term "the geography of recreation" is sometimes used synonymously with "the geography of tourism." Much overlap does exist although two fairly distinct subjects might be identified in terms of their focus of interest. Recreation, which might be defined as the use of time or activity which has its main purpose to refresh or entertain, may indeed be one of the main objectives of tourism and tourism may represent a particular form of recreation. Other forms of recreation, such as intra-urban recreation and many forms of outdoor recreation, do not possess the same travel and sojourn attributes as tourism nor do they embody the same service or industrial needs.

In the remainder of this paper the particular components of the geography of tourism are examined in greater detail and further appropriate lines of research are suggested.

SPATIAL PATTERNS OF SUPPLY

Like other economic and social activities, tourism does not occur evenly or randomly in space. A first and basic concern of the geographer is an examination of the areal occurrence of tourism at various scales--global, national, regional, or local. This involves delimiting spatial variations in the importance and nature of tourism in different areas, an exercise often limited by the ready availability of appropriate data. On an international scale, variations in the number of frontier arrivals or gross revenue from tourism are useful indicators and ones for which figures can be obtained from the World Tourism Organization (WTO). At other levels tourist bednights or employment figures in the tourist sector would be useful if available. The most fundamental approach is to draw up an inventory or existing tourist facilities, particularly accommodation. The importance of tourism in any area is indicated by the total bed capacity offered and its nature by the composition of the accommodation plant. A large number of first class hotels, for example, frequently suggests the importance of international tourism whereas a predominance of holiday homes usually indicates a domestic tourist region. Variations in seasonality and patronage by non-tourist travellers must also be taken into account. Although this approach was used at an early date on both a regional (Carlson 1938) and national (Boyer 1962) level, this most basic information, particularly represented cartographically, is still not available for many countries and regions.

Data on spatial variations in total bed capacity, however, do not necessarily indicate the relative importance of tourism or of the particular economic role it plays in any area. In Europe a generally accepted measure of the relative importance of tourism is the tourist function index popularized by Defert (1967). The tourist function (Tf) of an area is based on the juxtaposition of two populations--the visitors and the visited. It is derived by comparing the number of beds (N) available to tourists in the area with the resident population (P) of that area according to the formula:

\[ Tf = \frac{N}{P} \times 100 \]

Defert initially established the tourist function of various French towns but
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subsequently Tf values have been calculated for regions such as Provence (Atlas de Provence: Cote d’Azur 1976) and Colorado (Thompson 1971) and, at a national level, for New Zealand (Pearce 1979). Similarly, but on a larger scale, Rajotte (1977) has mapped the number of tourist days recorded in the Pacific Islands in relation to the size of the local population and the area of each destination.

Other research has focused on specific types of tourist facilities or particular branches of tourism. Geographers have examined the location and distribution of spas and thermal resorts (Defert 1960, Cosgrove and Jackson 1972), alpine and ski resorts (Meraudeau 1960, Preau 1968), hill stations and coastal resorts in the Orient (Robinson 1972, Senftleben 1973), caravan camps (Pryce 1967) and second homes (Wolfe 1951, Coppock 1977). Attempts have also been made to integrate these various aspects into a general review of tourism in a particular country, for example, Vuoristo’s study of Finland (1969) and Ginier’s study of France (1974).

The geographer’s interest should not be limited to establishing these spatial patterns. He should also seek to understand and explain them. In the main, the location of tourist resorts and regions has been discussed in terms of physical factors (climate, relief), cultural attractions, market access and the development of transport networks. While access and transport (for example, the development of spas and coastal resorts with the spread of the railways) have attracted a great deal of attention, there is need for a more systematic appraisal of physical and cultural attractions (Defert 1969). Other factors also merit further investigation. Brougham’s unintended sojourn at Cannes is an oft cited example of historical explanation in tourist development but temporal perspectives are too frequently ignored. The role of land tenure (Pearce 1979b) and the influence of government policy in determining the extent and location of tourism need exploring further. More research is required on the role of cultural differences. Culture in the Orient, according to Robinson (1972), is “the most pervasive influence on the recreation geography of the whole area,” Ritter (1975), notes the “neglect of the seacoast” in Lebanon and throughout the Islamic world. Earlier, Ritter (1967) had commented on the role of European immigrants in the development of seaside resorts in Israel. Comprehensive inter-national surveys such as that on skifields being undertaken by Barbier under the aegis of the International Geographical Union working group should shed further light not only on the influence of differing physical and cultural conditions but should also enable a more systematic evaluation of the role of the factors discussed above.

Despite an early recognition of its appropriateness for geographical study, few geographers appear to have contributed to the applied aspects of the determination of new areas or sites suitable for tourist development. This role has largely been undertaken by representatives of consulting and development agencies (Andriello 1965, Piperoglou 1966, Georgulas 1970). More specific attempts have also been made to compute measures of tourist attractiveness (Var, Beck, and Loftus 1974), though again, not by geographers. Two major approaches have been used here. Either visitor preferences are surveyed in comparable areas or, using the Delphi technique, a range of “experts” are asked to rank the area in question according to a selection of variables (climate, scenery, cultural interests, etc.) given different weightings. Although the latter approach allows a more ready assessment of any region, evaluating tourist attractiveness through the eyes of the tourist is undoubtedly more satisfactory if resources permit.
SPATIAL PATTERNS OF DEMAND

Spatial patterns of demand as well as supply must be analyzed. Studies linking origin and destination through the concept of recreational or vacational hinterlands are particularly useful. Initial emphasis was given to delimiting the hinterlands of particular regions or resorts. This appears to have been due to the more ready availability of suitable data, for example, hotel registers. Wolfe's seminal work on second homes in Ontario (1951) is equally important as a pioneering study of vacational hinterlands. Through an analysis of mailing lists, Wolfe was able to identify significant variations in the origins of summer cottagers in different parts of Ontario and to account for these. He notes, for example, that different "pulling forces" influence the destination of American cottagers. Speaking of the patterns of ownership amongst Torontonians Wolfe observes:

In ecological terms we have added segments of two zones to the city of Toronto: a buffer zone 50 miles wide, a recreation bridge to cross....and a summer dormitory zone seventy miles wide (1951:28).

The outer limit of this latter zone is fixed by a comfortable one day's driving distance. Wolfe further notes a zonation in destinations corresponding with zones within the city, with the more well-to-do travelling greater distances. In a subsequent paper, Wolfe (1952) develops this idea of ecological zones in the resorts corresponding to those in the city.

Subsequent research concerned the influence of various factors on the development of vacational hinterlands. The friction of distance was found to be a significant factor, the number of visitors declining as distance away from the facility increased. Deasy and Griess (1966), in their examination of the impact of two tourist attractions in Pennsylvania, found major discrepancies between a pattern of geometrically regular hypothetical source areas and the irregular patterns actually identified. Discussion of the various "disruptive forces" creating these irregularities are inconclusive and the authors make a plea for more research on the "underlying forces that are operative." However their dismissal of theoretical efforts in this field is perhaps a little abrupt. Rajotte (1975) suggests that the critical factor is not so much distance but time and then shows the effect of developments in transport technology on extending the vacational hinterlands of Canadian cities.

Studies such as Rajotte's which focus on the hinterland of the city or generating region generally followed those which dealt with the market areas of resorts or facilities. Crisler and Hunt (1952) attempted to define rather arbitrarily recreation regions in Missouri. More precise patterns were later established as more statistical data became available through household and other surveys. Much of the early work in this field was undertaken in France where the comprehensive surveys of the Institut National de la Statistique et des Etudes Economiques (INSEE) have supported more specific individual research. There, Boyer's initial observations on the holiday patterns of workers in Paris and the North (1962) were complemented by Cribier's extensive study (1969) of the patterns of summer holiday-taking amongst the French. Cribier shows the regional character of domestic tourism by delimiting the hinterlands of the major metropolitan areas of France. Moreover, within each hinterland she identifies variations in the type of tourism practiced. Non-commercial accommodation (second homes, visits to friends and relations) predominates close to home, while those
traveling further afield tend to stay in hotels. Similar differences within hinterlands have also been observed in New Zealand. In his analysis of the holiday patterns of Dunedin residents, Goldsmith (1974) shows that groups on more modest incomes may travel further but that their vacations are generally centered on the permanent home and the extended urban family whereas the better educated, more highly paid professional or administrative worker tends to holiday closer to Dunedin in a holiday home. In their survey of Canterbury holidaymakers, Johnston, Peace and Cant (1976) found social visiting and sightseeing to be the major objectives of those traveling to the North Island. Those pursuing water-based activities or seeking general relaxation generally found suitable holiday destinations closer to home. Further research on the extent and nature of spatial variations within particular hinterlands and why they occur is required if one is to understand fully the nature of tourist demand and to plan for it.

Other aspects of demand were also noted by Boyer (1962) and developed in his later study (1972). In particular Boyer showed that the rates of holiday taking varied according to a number of socio-economic variables: age, income, occupation, size of residential area, etc. Similar variations have also been noted in national travel surveys elsewhere. It is important to note though that these variables are all inter-related and that to date there has been little attempt to identify the most important. Boyer shows, for example, that in 1970 77% of all Parisians took a holiday away from home whereas only 17.5% of residents in rural communes did. It may be that the desire to escape the city increases with city size but clearly in this case the ability to do so also increases, incomes in Paris being as much as twice those elsewhere in France. More detailed statistical analysis must be undertaken to identify more precisely the most significant demand variables.

THE GEOGRAPHY OF RESORTS

The comparative neglect of resorts by geographers is surprising, given both the early recognition of fundamental differences in their form and function (Jones 1933, Gilbert 1939, 1949) and the prominence of urban studies in the discipline as a whole. Stansfield (1971) attributes part of this neglect to the rural orientation of much recreation and tourist research in North America, yet this is hardly the case in Europe. Whatever the reason, this past lack of interest has meant that today numerous research opportunities exist.

In general, a resort might be defined as an urban community where tourism is a major or prime function, this function being measured perhaps in terms of employment in the tourist sector or by some index of accommodation (high Tf values, for example). The geography of resorts consists of a number of inter-related aspects. Firstly, as was noted earlier, their location and distribution might be examined. Associated with this is the need for discussion of their role in urban networks and hierarchies (Barbaza 1970). In France, for instance, tourism, both in the Alps and along the coast, is one of the main driving forces behind the expansion of existing settlements and the creation of new urban areas. Although not recognized as "new towns" as such, resorts like La Plagne and La Grande Motte significantly add to and modify existing urban networks, particularly at a regional level. These new and comprehensively planned resorts are developing their own morphological identity in response to new recreational demands (Pearce 1978). In contrast to many of the traditional resorts which often developed in a rather haphazard fashion around the
waterfront or spa, the new resorts incorporate such principles as separation of various modes of transport, a more coherent spatial structure which links accommodation closely to recreational facilities and an attempt to equate bed capacities with those of the beach or skifield. Such functional resorts are not without their critics, many of whom see the new forms as leading to an increasing “homogenization” of the landscape (Relph 1976), although some of these claims are perhaps exaggerated. Morphological studies of coastal resorts have also been completed in the United States (Stansfield 1969, Stansfield and Rickert 1970), Australia (Pigram 1977) and Britain (Barrett cited by Wall 1971). Other recent studies have also been discussed in more general terms the characteristics of resort towns, particularly of the more traditional resorts (Lavery 1971, Robinson 1976) but much remains to be done, particularly in developing countries.

Location and form are closely linked. The freedom needed to implement the principles characterizing France’s integrated resorts has led to their development away from existing centers, either on virgin stretches of the coastline or above the limits of traditional settlement in the Alps. On the other hand, where the aim is to incorporate existing communities and the local population in a tourist development project, careful planning will be needed to extend or adapt present settlements to cater for new functions.

An even more serious neglect by geographers is that of the role of tourism in other urban areas, especially big cities (Vetter 1975). Even if their T/ values are low, in terms of absolute tourist bed capacities cities such as Paris, London, and Tokyo rank as the biggest tourist centers in the world. Two-thirds of all bednights of foreign visitors to Japan are spent in the Tokyo area and the proportion of visitors to England staying in London is reportedly even higher. Hall (1970:445) has expressed the view that “no one should doubt that the age of mass tourism is the biggest single factor for change in the great capitals of Europe—and in many smaller historic cities too—in the last thirty years of this century.” Accommodation development is responsible for much of this change, as evidenced by high rise hotels in downtown areas and the growing incursion of hotels and motels into many former residential suburbs. Then too there is the growth of entertainment sectors of various forms—San Francisco’s Fisherman’s Wharf, Paris’s Pigalle and Sydney’s King’s Cross. Although these centers may be frequented by residents as well as tourists, much of the landscape consists of what Jackson (cited by Relph 1976:93) calls “otherdirected architecture,” that is, “architecture which is deliberately directed towards outsiders, spectators, passers-by and above all consumers.” At the same time the boom in air travel has led to the growth of ever bigger, space-consuming airports with their attendant planning and location problems. Even if it has as yet been inadequately documented, there can be little doubt that tourism is an important force in shaping many of today’s large cities. Geographers should ensure that this process is more fully understood in the future.

TOURIST MOVEMENTS AND FLOWS

Movement is the basic element of tourism, being the dynamic link in any tourist system. Analysis of tourist flows and travel is an integral part of the geography of tourism. It is also one in which there has been a greater development of quantitative approaches although the total amount of research undertaken in this field is not large. Significant contributions to the spatial analysis of tourist movements have also been made by non-geographers.
Much of the research to date has consisted of macro-level studies of the direction and intensity of tourist flows, whether measured in terms of revenue receipts (Guthrie 1961) or the volume of tourist traffic (Williams and Zelinsky 1970). Particularly at an international level, the gross exchanges between tourist generating and receiving countries can be grasped and portrayed reasonably readily from standard statistical publications such as those of the World Tourism Organization (WTO), the Organization for Economic Cooperation and Development (OECD), or the Pacific Area Travel Association (PATA). Explanation of the patterns observed, however, is much more difficult for as Guthrie noted, the motivations for foreign travel are extremely diverse and there is no universal measure of tourist attractiveness.

Guthrie (1961), in one of the first attempts to analyse systematically international tourism, found that variations in tourist generated revenue between countries were influenced by: (1) the location of a tourist receiving country relative to tourist-originating countries (particularly to North America and Western Europe), (2) the level of average income in neighboring countries (travel between the United States of America and Canada will be greater than between Portugal and Spain), and (3) the amount of emigration from the tourist-receiving country (a significant proportion of international travel is to visit friends and relations and other tourism is dependent on information flows). Almost half of the relative variation in tourist revenue was attributed to the advantages or disadvantages of location, closeness being measured by cost of transportation. Conclusions regarding a fourth factor, volume of foreign trade, were somewhat inconclusive. In an attempt to assess the importance of the other essentially qualitative differences whose existence he recognized (e.g., scenery and cultural characteristics), Guthrie derived an index of deviations from observed revenues of estimates based on location, exports and emigration. He suggested that this index could be interpreted as a measure of subjective preferences by tourists for the particular set of qualitative characteristics offered by various countries. Although he was able to identify preferred countries (USA, Mexico, Canada, U.K. etc.) the exercise did little to clarify the nature of their attractions.

A similar approach was later adopted by Williams and Zelinsky (1970) who derived a relative acceptance index to measure the relative success of a country in attracting tourists from a generating country. Their index was calculated by dividing the difference between actual and expected flows by the expected flow, the latter having been calculated by evenly allocating arrivals between a set of fourteen selected countries. The authors were able to identify strengths and weaknesses of flows between pairs of countries examined and advance a number of factors (e.g., distance, international connectivity, reciprocity of tourist flows, cost of travel, etc.) to explain the patterns observed. Williams and Zelinsky's paper has been widely cited, and although their explanations have been critically appraised (e.g., Matley 1976), there appears to have been no application of their techniques to other sets of data.

A much more widely tested technique incorporating the friction of distance factor in the development of a macro-theory of tourist flows is the gravity model (Archer and Shea 1973). The basic gravity model expressed the flow of people from origin to destination as a function of the population of each and the distance between them. Tourist flows, however, are not necessarily reciprocal as Wolfe (1970) points out in the case of second homes where the traffic outward from an urban area to a cottage resort is not complemented by a reverse flow to the city. Consequently, when applied to tourist flows, the basic gravity model has been modified in various ways. Such
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Modifications include the incorporation of variables measuring the attractiveness of the destinations (the number of ski-lifts, the ratio of water to land area) intervening opportunities or the measurement of distance in terms of time or travel cost. Modified gravity models have been applied with some success to specific cases such as tourist travel to Las Vegas (Malamud 1973), the demand for second homes (Bell 1977), skifields (McAllister and Klett 1976) and, less frequently, to more general studies such as in Crampon and Tan's analysis of tourist flows in the Pacific (1973).

Particularly in the more specific cases where interaction generators can be identified more clearly and incorporated into the model, modified gravity models can be a useful predictive tool. However, their value in advancing the general understanding of the process of tourist travel is perhaps more limited, especially given that such travel generally involves circuits rather than vectors of movement. Consequently, more emphasis should be given to examining the actual spatial patterns of trips, movements, and the nature of the travel linkages in any tourist system.

Campbell (1966) and Rajotte (1975) see “recreational” travel as being urban generated and scattered tangentially or radially from the city whereas “tourist” travel is essentially linear and highway oriented. These concepts provide a useful framework for further study, although Rajotte’s assumption that the tourist’s primary interest is invariably in sightseeing and traveling is a little narrow. Rajotte also notes how travel patterns have become much more flexible and diffuse with changes in transport technology, with the ubiquitous motor vehicle replacing the linearly-constrained railways or the river steamers. Contemporary studies such as those by Carlson (1938) and Deasy (1949) also show the effect that the motor car was beginning to have on travel patterns and the rise and fall in popularity of destinations and types of accommodation. Future writers may well recount what happened when gas prices became exorbitant or supplies exhausted.

Mariot (cited by Matley 1976) has developed a model of tourist flows between the place of permanent residence and a tourist center linked by an access route, a return route and a “recreational route.” Tourists using the access and return routes do not utilize the tourist facilities of the region through which they are passing whereas those using the recreational route utilize the region’s tourist facilities even though it is not the ultimate goal of their journey. Mednick (1975) used Markov chain analysis to examine the travel patterns of United States visitors to Ontario. Specifically the model describes the probabilities of these visitors making overnight stops among ten economic regions in the province. It was found that a visitor’s travel pattern could be predicted fairly accurately from the location of his first overnight stop in the state. Those visitors arriving in certain areas of the state tended to stay longer than did those whose first overnight stop was elsewhere in the state.

More empirical work at all scales of tourist travel is also needed. It is often suggested that a “tourist circuit” exists, whether on the scale of the “if it’s Tuesday it must be Belgium” tours of Western Europe or of excursions of the “sights” of London or Paris. However, there have been very few attempts to define the nature and scope of such circuits and to analyze movement along them. Pearce (1977) has attempted a basic spatial definition of the package tour circuit in New Zealand and is currently extending this research. Data on tourists traveling independently are less readily available but no less important. This author has also shown (Pearce 1978b) that there are significant demographic variations in the flows of international tourists and that
destinations attracting predominantly youthful, middle-aged or elderly travellers can be identified. Again, more research is required before the patterns observed can be fully understood.

Coupled with this research on spatial patterns is the need for further investigations into the behavioral aspects of tourist travel. At the local level, Murphy and Rosenblood (1974) examined the spatial search process of visitors to Victoria (Canada) and found that the search pattern was closely related to their prior mental images of the city and their motivations, for example sightseeing or shopping. On an international level, Miossec (1977) emphasizes the role of tourists’ perception and their information fields, and Cazes (1976) has examined the geographic images presented in tourist publicity. Myers and Moncrief (1978) analyzed leisure travel decision-making between spouses and found that the destination decision, felt to be the most important choice to be made, was shared by most parties. Choice of accommodation was generally found to be a joint decision as well but husbands overwhelmingly dominated the route decision. Unfortunately the authors do not report on the factors influencing the various decisions made. Clearly there is room for more research on decision-making and how destinations and routes are selected and trips planned. Much of the methodology developed in research on perception in outdoor recreation (Mercer 1971) and other aspects of travel (Stutz 1977) could be particularly useful here.

THE IMPACT OF TOURISM

Geographers have long been interested in the various interrelationships between man and his environment, particularly his role in changing physical and cultural landscapes (Thomas 1956). The examination of the impact of tourists and tourism on particular areas is a natural and logical extension of this interest. Several of the early studies noted some of the changes brought about by the growth of the tourist industry (Jones 1933, Eiselen 1945) but later, in the 1960s, more specific studies on development and impact began to appear. These were essentially place-oriented and sought to explain the changes induced by tourism in particular areas, for example mountain communities in Western Europe (Marion and Loup 1965, Barbier 1968, Herbin 1969). The 1970s have seen a boom in impact studies, particularly in developing countries (Tempelman and Peppelenbosch 1974, Hills and Lundgren 1977, Rajotte 1977).

Recognized fields of investigation include the economic, environmental, and social/cultural impact of tourism. Considerable debate exists over the nature and extent of these impacts (UNESCO 1976). Tourism is no longer heralded uncritically as a highly desirable path towards economic development by many writers. Some argue that any economic gains are offset by social or environmental costs. In many cases the issues are clouded by emotionalism. Moreover, techniques for measuring impact are often so imprecise as to be unable to greatly clarify the matter. Mings (1978:340) suggests that “our inadequate understanding of the varied impacts of tourism development has contributed to both unwarranted optimism and excessive negativism among public officials” and puts the case for more research in this field. An analysis of the spatial dynamics of tourism is one way in which geographers can contribute to a greater understanding of these issues.
Selke (1936) and Christaller (1954, 1964) noted that tourism tends to develop on the periphery and may thus stimulate economic activity in outlying or peripheral regions. Attention for a long time was focused on these peripheral regions, the destinations, and links with the generating or core regions were seen almost solely in terms of the visitor flows and vocational hinterlands noted earlier. In this context, tourist development was seen as being unreservedly beneficial, the incoming tourists stimulating much economic activity at the holiday destination. Closer examination of the tourist industry subsequently showed that in many cases the generating region was not only the source of the tourists but also of much of the capital, technology, supplies and labor (Odouard 1973, Tempelman and Peppelenbosch 1974, Samy 1977, Mings 1978). Consequently there is often a net outflow of profit to the core with little or no stimulus to the local economy. Attempts have been made to measure the actual economic benefit to the host community using various economic techniques, notably the multiplier (Coppock and Duffield 1975, Archer 1977) and input-output analysis (Standley 1971). Again evidence is conflicting, analysis often being hampered by inadequate statistical data.

These technical studies need to be put in some wider conceptual framework. Hills and Lundgren develop the concept of international tourism as a core-periphery system in their study of the Caribbean. Two subsystems are identified within the international tourist system, the generating region, metropolitan Canada, and the destination, the Caribbean island. After outlining the linkages between the two, the writers observe that "the functional mechanism of the international tourist system gradually emerges as a metropolitan corporate multi-functional entity, within which global management is conducted with little concern for the effects upon local environment, society and economy" (Hills and Lundgren 1977).

As Hills and Lundgren show, the studies of the structure and process of tourist development are necessary for understanding the nature and extent of tourist impact, economic or otherwise. Pearce (1978c) examined two different processes of tourist development in France based on the division of responsibility in the development process. Each has a distinct core-periphery relationship. In the case of "integrated resorts", development is monopolised by an external metropolitan concern. In the second, "catalytic" development occurs when the initial activities of a major external developer generate complementary smaller-scale developments by local companies or individuals.

In terms of regional development, tourism may both alleviate and accentuate regional economic imbalances. Both effects are evident in the Canaries (Odouard 1973). Concentration of tourism in Las Palmas has extended the influence of that city on the island of Grande Canarie. In Tenerife, on the other hand, the more even dispersal of tourist activity has limited the growth of the capital, Santa Cruz. Tempelman and Peppelenbosch (1974) observe that in developing countries the most attractive regions are often developed so rapidly that balanced regional development is scarcely possible and that regional contrasts may in fact be heightened by "over-developed" tourist areas, as in the case of the island of Djerba in Southern Tunisia.

Further research is required into the manner in and extent to which tourism is inserted in a particular milieu, following the lines of various French geographers.
Towards a Geography of Tourism

(Preau 1968, 1970, Barbaza 1970). In particular, it is essential that tourism is not seen as a monolithic phenomenon and it is recognized that there are various processes and degrees of tourist development. Moreover, considerable diversity exists in the contexts in which tourist development occurs. Pollard notes in the case of the Caribbean:

In terms of scale of activity, environmental, economic, cultural and political factors underlie a basic dichotomy between the northern and eastern islands, while the eastern Caribbean itself shows considerable diversity, partly as a result of environmental contrasts between the inner and outer areas (Pollard 1976:61).

In addition, it is important not to divorce tourism from other sectors of the economy which it may be serving to stimulate or with which it may be competing for investment funds or labor. Odouard (1973), for example, has shown that tourist development in the Canaries is transforming the work force, creating shortages for the traditional and labor intensive cultivation of bananas and tomatoes. Care must be taken, for agricultural decline in other areas may already have set in before the advent of tourism (Barbier, Durbiano, and Vidal 1976). In other cases, tourism in creating a demand for labor and stimulating rural depopulation may effectively lead to a modernization of agricultural production (Boaglio 1973).

Environmental Impact

Much of the necessary research on environmental matters centers around the following basic dilemma—tourism depends heavily on an attractive and unspoiled environment but at the same time development of infrastructure to support the tourist invariably transforms this environment. Although the problem has been recognized, geographical literature on the topic is not very large and has focused mainly on aspects of carrying capacity. The notion of carrying capacity as the threshold of tourist activity beyond which the environment is degraded, facilities saturated, or visitor enjoyment diminished is generally accepted. However difficulties in measuring and quantifying these limits have restricted its utility as a planning tool (Barkham 1973), although it has been successfully employed in such places as Languedoc-Roussillon in southern France and Brittas Bay in Ireland. This is one area where physical geographers could play a much greater role.

At the same time, such specific research should be seen as an integral part of larger studies embracing other aspects of development. The environmental impact of a particular project will depend not only on the fragility of the environment in question but also on the nature and scale of the development undertaken, for example on the size and siting of accommodation or on the patterns of movement of visitors in and around the resort. In this respect, the unpublished guidelines prepared by the Organization for Economic Cooperation and Development (O.E.C.D.) for environmental case studies recently carried out by member countries are particularly useful. Essentially a number of tourist-generated stressor activities are identified, the resulting stress is examined and the subsequent responses assessed.

Using these guidelines, an interesting set of inter-relationships between tourism and the environment was revealed in the case study of Queenstown (New Zealand) particularly with reference to sewage disposal (Pearce 1978d). During the 1960s the growth of tourism placed stress on the town’s existing sewerage system, with effluent discharge from the septic tanks polluting a branch of the surrounding lake. Financial
assistance from central government for a new sewerage scheme was eventually made available when the construction of new hotels was delayed. The new scheme removed the threat of lake pollution from this source but has resulted in a high level of local authority indebtedness. Subdivision and sale of public lands on nearby Queenstown Hill will contribute to the repayment of these loans but the subdivision itself involves sensitive environmental consideration.

Spatially, two broad environmental strategies might be adopted in planning tourist development—concentration or dispersal of tourist activity. In the former case development is concentrated in resistant pockets (or areas "abandoned" to tourism) leaving more fragile intermediate areas untouched, for example the Languedoc-Roussillon littoral. Conversely, a policy of dispersal might be followed whereby development in more fragile environments is small-scale and scattered so as not to create undue pressure on any one site, as in the case of France's Aquitaine coastline.

Social-cultural impact

Tourism may be seen and studied as an agent of change which transforms the social geography of a given area. Similar to economic impact, the social-cultural impact of tourism may also be considered in terms of spatial dynamics. Social change arises when two groups, the visitors and the visited, are brought together, perhaps by a third party, the tourist operative (White 1974), as the tourists arrive at their destination or travel along their chosen circuit. The degree of interaction or the extent of change will depend on a number of factors, including the size of the tourist traffic and the resident population, the length and nature of contact, the degree of concentration or dispersal of the tourist flows as well as the "cultural distance" between the two groups. Again it is important to remember that neither group is homogenous, and that there is a range in tourist and host characteristics (Smith 1977).

One of the most important factors leading to social change is the so-called "demonstration effect" whereby both hosts and guests are exposed in varying degrees to representatives of another land, another culture. The "authenticity" of this contact is questionable. The often free-spending, frivolous behavior displayed by the tourist may be as atypical of the other fifty weeks of his year as the staged cultural attraction is as unrepresentative of the way of life of the host. Stereotyping the host may have little lasting effect on the guest but the image he presents may have significant repercussions for his host, leading to changed aspirations, envy or even animosity (Doxey 1975), and the transformation of existing social structures. In the Greek island of Myconos, for example, the sociologist Lambiri-Dimaki (1976) notes the "democratization and modernization of attitudes" among the young arising out of contact with youthful Western tourists. Tourism elsewhere is more commonly seen as corrupting local values (Turner and Ash 1975). Ultimately, the apparent desirability of such changes may depend on the social values of the investigator himself.

Tourist development also gives rise to other social-cultural effects. White (1974), for example, has shown a decline in Romansch speaking in a multi-lingual area of Switzerland as tourism there has developed. White observes that the degree of change is not only due to the volume and type of tourism experienced but also to the demographic and economic vitality of the local population:
A strong area can sustain the capitalization and provision of labor from within itself, while a weak area is immediately more susceptible to outside economic influences in the form of external investment and immigration, so that the local sociocultural structure is quickly changed (1974:35-36).

Demographically, tourism may have varied effects. In areas where traditional activities are in decline and out-migration is evident, the advent of tourism may lead to a rejuvenation of the population by retaining the young adult population in the community (Barbier, Durbiano, and Vidal 1976). In-migration may also occur when the local population is unable to fulfill new labor demands with the influx of workers altering the composition and structure of that population (Pearce 1978d).

Management of some of these problems may in part also be based on spatial options. Planners might consciously concentrate tourists in certain isolated localities, thus insulating the local population from any contact with them. Or again, the tourists might be dispersed throughout the country with the aim of reducing friction by limiting the numbers of tourists in any one locality.

Clearly the study of the impact of tourism is an area where a broad approach must be adopted. As has been shown above, tourism has associated and inter-related economic, environmental and social/cultural effects. The extent and nature of these will depend on both the scale and type of development undertaken and the characteristics of the host population and local environment. A useful integrating and inter-disciplinary approach incorporating these various aspects is the systems modelling technique employed in the Obergurgel model (Franz and Holling 1974). Components of the model fall into four major classes: recreational demand, population and economic development, farming and ecological change, land use and development control. Changes in the basic components and interactions between them are simulated using a systems modelling approach. When applied to the small Austrian village of Obergurgel, the model predicted that the most likely natural limiting factor to economic growth was safe land for building, that population growth and limits on building would give rise to emigration with its attendant social problems and that building taxes and zoning controls would appear to be the best measures for limiting growth. This model has the advantages of incorporating a wide range of factors into a dynamic system and merits further application elsewhere.

MODELS OF TOURIST SPACE

The theoretical and conceptual base of tourist geography owes much to the recent work of the Frenchman, J. M. Miossec (1976, 1977) and the Japanese N. Yokeno (1974). Miossec's work, in particular, provides a very useful synthesis in which many of the elements discussed in this paper are brought together.

Both Miossec and Yokeno have developed models of tourist space wherein the volume and intensity of tourist travel decreases outwards from a generating core. In Miossec's model (Figure 1), the core region is surrounded by four major belts or zones in which the volume of tourism decreases and travel motives, means and costs change as well (Sector 1). In the real world these theoretical regular concentric zones are subject to modification by "positive deformations" (low cost of living, favorable climate, historic links) which extend the belts and the "negative" ones (essentially political) which compress them (Sectors 2 and 3). These positive and negative deformations are not independent. Puerto Rico, for example, benefited from the...
Figure 1
A Theoretical Model of Tourist Space

Source: Miossec (1976)
Cuban blockade and the development of the Mediterranean is in part due to political barriers in Eastern Europe. Moreover, a series of cores exist, giving rise to concurrent spatial demands (Sector 4). Miossec also attempts to incorporate perception of this space in his model although the schematic representation of this is not particularly clear. In general, knowledge of destinations declines with distance but there may be certain points of reference or evocative names so that the individual's mental map of the tourist space has both concentric and sectoral constraints. Miossec also suggests the quality of the image will depend on the socio-political-linguistic environment of the points of departure and arrival. Finally, the model incorporates the idea of a hierarchy of resorts. This is developed in his second model (Figure 3).

Similar notions to these are embodied in Yokeno's model (Figure 2) of international travel, a development of his earlier work applying the concepts of Thunen and Weber to the tourist industry (1968). When there are no obstacles between the tourist sending country (S) and the tourist receiving country (R) tourist traffic will decrease in a regular concentric fashion away from the core. Deformations of the regular hypothetical zones (R1) may result from the predominance of capital city tourism (R2), a major transport link (R3), a hierarchy of cities (R4), or tourism price levels (R5) is visited at the expense of R5 which is bypassed as tourist costs are too high).

In Figure 3, Miossec has developed a model of the spatial dynamics of tourist space. In determining the structural evolution of tourist regions through time and in space, Miossec considers four basic elements: (1) resorts, (2) transport networks, (3) the behavior of tourists, and (4) the attitudes of the local decision-makers and population.

As the tourist industry expands an increasingly complex hierarchial system of resorts and transport networks evolves, the tourists become more aware of the region's possibilities with consequent changes in their behavior. Changes in local attitudes may lead to the complete acceptance of tourism, the adoption of planning controls or even the rejection of tourism. However each of the four elements need not develop apace and therein lies the source of many of the problems and disadvantages to which tourism can give rise.

Given the present state of the geography of tourism, one of the most useful functions of these models is to synthesize the various strands of a rather complex phenomenon. This synthesis is particularly important for pedagogic purposes. For the researcher, the models provide a valuable framework within which further empirical and conceptual work might be based. Barbaza (1975:39), however, cautions against the dangers of purely theoretical research and suggests that "theories and economic calculations must not refer to an abstract or homogenous area but should deal with a living, vulnerable and valuable area which geographers must define and outline."

CONCLUSIONS

Geographers have dealt with many facets of tourism in the past half century, particularly in the last decade. Although often fragmented in nature, this literature has an underlying sense of unity when viewed from a spatial perspective and provides a substantial base for a geography of tourism. To expand this base and develop a cohesive sub-discipline, geographers must firstly expand the scope of their research to embrace a wider range of topics, many of which have been indicated above. Secondly,
they must adopt approaches and techniques appropriate to the study of the phenomenon of tourism, rather than relying wholly on existing geographical concepts and methodology. This is not to deny the contribution of past studies but continuous adaptation of existing theories and techniques at the expense of original thought and research directed at the specific characteristics and problems of tourism can in the end only be limiting. The recent work of Miossec is particularly encouraging in this respect. In this way, future research may go beyond the merely descriptive to provide a better theoretical and behavioral understanding of tourism and enable geographers to make more applied contributions in such fields as planning and development.
### Figure 3

**A Synthesis of the Dynamics of Tourist Space**

<table>
<thead>
<tr>
<th>Resorts</th>
<th>Transport</th>
<th>Tourist Behaviour</th>
<th>Attitudes of Decision Makers and Population of Receiving Region</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
<td>0</td>
<td>0</td>
<td>0</td>
</tr>
<tr>
<td>A</td>
<td>B</td>
<td>territory</td>
<td>traversed distant</td>
</tr>
<tr>
<td>1</td>
<td>1</td>
<td>pioneer resort</td>
<td>opening up</td>
</tr>
<tr>
<td>2</td>
<td>2</td>
<td>multiplication of resorts</td>
<td>increase of transport links between resort</td>
</tr>
<tr>
<td>3</td>
<td>3</td>
<td>Organisation of the holiday space of each resort: Beginning of a hierarchy and specialisation</td>
<td>Excursion circuits</td>
</tr>
<tr>
<td>4</td>
<td>4</td>
<td>hierarchy specialisation saturation</td>
<td>connectivity maximum</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
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</tr>
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**Source:** Miossec (1976)
Acknowledgements

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