


1991

The Impact of Tourism on Block Island

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THE IMPACT OF TOURISM ON BLOCK ISLAND

BY

THOMAS GREEN

A THESIS SUBMITTED IN PARTIAL FULFILLMENT OF THE

REQUIREMENTS FOR THE DEGREE OF

MASTERS OF ARTS

IN

MARINE AFFAIRS

THE UNIVERSITY OF RHODE ISLAND

1991

MASTER OF ARTS

BY

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1991

ABSTRACT

This thesis examines the impacts of tourism on the residents of Block Island. More specifically the study seeks to identify the specific areas of concern, as perceived by the residents, in three major areas of impact; economic, social and environmental. It was hypothesized that the residents of Block Island, a mature tourist destination area, had formulated perceptions of the impacts of tourism and that these perceptions, if analyzed, would identify protection of the environment and threats to the Island's lifestyle as major concerns. Factor analysis was employed to analyze survey responses from residents on questions regarding tourism on Block Island. The results of that analysis suggest that residents are indeed concerned with protection of the environment and threats to their lifestyle. Residents perceived tourists' disregard for the Island's fragile environment and the social disruptions experienced during the peak season as root causes for their concerns. Residents also feel that tourists have an uncaring attitude towards the Islander's lifestyle. Importantly, however, the findings also indicated that the residents of the Island clearly acknowledged the positive economic and social benefits associated with tourism.

In identifying the positive and negative impacts associated with tourism the residents believe that in order to maintain the lifestyle and environment they desire they need to maintain as much control as possible over off-Island economic interests and the physical number of tourists arriving on the Island.

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CHAPTER ONE

INTRODUCTION

Statement Of The Problem Objective

In communities throughout the United States and the world, decisions regarding the development of recreational and tourism related opportunities are all too often based solely on the economic benefits to be realized (Pizam, 1978). These decisions affect two groups of people: there are those directly involved in the development process such as developers, business operators and their employees, etc. who receive a direct return from tourism, and those residents and enterprises that may not be directly involved in tourism related activities but are directly or indirectly affected by tourism and development (Pearce, 1989). Although this latter group may receive benefits, through the multiplier effect, they also must bear many of the indirect costs such as tourist induced inflation, pollution, congestion, etc.

Coastal tourism, characterized by its marine orientation, is without a doubt one of the most significant forms of tourism today (Pearce, 1989). The world's coastlines are experiencing a population growth phenomena and whether the growth is fast or slow host communities are being impacted. Communities in the coastal zone with their complex, fragile and dynamic systems are especially

vulnerable to tourism development; coastal and oceanic islands have an even greater appeal to tourists as an escape from the usual, an adventure or some other unknown delight, and subsequently are even more vulnerable to tourism. At this time thousands of islands are undergoing fast paced development based for the most part on tourism (Clark, 1985). The more obvious by-products of this development phenomenon are deterioration of the environment accompanied by a decline in the quality of life for the residents.

As communities experience tourism development, frequently at the expense of the resident population, there is a need to integrate residents' attitudes and perceptions regarding development with the community's development plans. Investigation into residents' views regarding the trade-offs between the positive and negative economic, social and environmental impacts of tourism suggests that residents will prioritize their concerns and identify which planning policies are commonly believed to be in their best interests (Liu, Sheldon and Var, 1987). Tourism and development planning, if monitored and managed by local populations, can represent cooperation among all sectors of a community with respect to the differences in individual life styles, cultures, quality of life and environmental values. Such cooperation would enable the formulation of a development plan acceptable to the greater community and subsequently such a plan would have a greater chance of being successfully implemented, (Ives and Furseth, 1988; Murphy, 1980).

This thesis is designed to assess how the various impacts of tourism are perceived by the residents of Block Island. The study, through survey data, explores questions relating to the residents'

attitudes and perceptions regarding the economic, social and environmental consequences associated with tourism. It identifies the impacts of tourism, then through analysis determines how residents rank the various impacts in terms of importance to the individual and the community as a whole. Further evaluation of the data will seek to reveal residents' priorities with respect to what direction the Island's community planning should take.

Justification For And Significance Of The Study

Based on economic and historic reasons, it has been predicted that by the year 2000 more than 75 percent of the U. S. population will be residing within 50 miles of the coast (Charlier, 1989). As the population of coastal areas increases, along with indications that domestic tourism will continue to grow at a steady rate (Inskeep, 1987), so do the pressures for recreation, tourism and its related development in areas attractive for coastal recreation and in tourist destinations (Murphy, 1980).

The major stimulus for the development of tourism in a given area is economic (Cooper and Jackson,1989; Peterson, 1983; Muphy,1980; Roehl and Fesenmaier, 1983; Smith,1989) and although used as a development tool to promote employment opportunities, broaden tax bases and in general to accumulate capitol investment, there is also a degree of revenue leakage out of the targeted area, and furthermore, the costs required to support the tourist industry may be disproportionately levied on the resident community (Downing and Frank, 1983).

The attractiveness of tourist destination areas triggers many social and environmental consequences. For example, Charlier (1989) points out that this attractiveness causes real estate prices to soar to unprecedented heights, leading local residents to sell their property and move away while at the same time other professional people move into the expensive areas creating a new and very different social stratum. In a study by Peck and Lepie (1989), the authors, spinning off of their own work and previous studies, generalize that profits realized from this type of transaction flow out of the community as a form of economic leakage. The power in the community such as ownership of land, sources of financing and input from local people also changes. The authors further state that most of the new residents are usually affluent and widely traveled with administrative experience. They are accustomed to being busy, see themselves as being important and tend to integrate easily into community councils and service organizations where they tend to predominate. Ultimately the future development may be decided by people, conditions and forces from well outside the kinship and social networks of the island community, which leads to conflicts of interest.

There is an ample body of literature on tourism as a useful development tool in both developed and developing countries (Charlier, 1989; Gunn, 1979; Rosenow and Pulsipher, 1979; O.C.E.D., 1980; Yapp, 1986) and an evolving body of literature that identifies negative impacts (social and economic) associated with planning for tourism and tourism in general (Downing and Frank, 1984; Farrell, 1982; Rohel and Fesenmaier, 1983; Shelby and Heberlien, 1986;

Williams and Shaw, 1984). In addition to the social and economic effects, tourism produces environmental effects such as crowding, noise, litter, property destruction and pollution (Liu and Var, 1986). The literature also identifies tourists as becoming increasingly demanding that destination areas be not only relaxing and interesting but that the environment also be of high quality and pollution-free (Inskip, 1987). Subsequently there is a new awareness of the importance for environmental planning for tourism from both a resident and tourist perspective (Liu and Var, 1986).

Particularly vulnerable to overuse and over development, especially from outside interests (Pearce, 1989), are those places that offer the greatest tourist potential such as small islands which are environmentally sensitive as a result of the complex and varied processes that occur within the island environment (Charlier, 1989; Inskip, 1987; McEacherin and Towle, 1974).

For example, a basic feature of islands is the existence of a limited and fixed endowment of resources (land, fresh water, flora, fauna etc.), that, unlike the continental land mass, applies to the upland resources as well as the coastal plain (McEacheran and Towle, 1974). These traditional barriers to over development (scarcity or absence of resources) on Islands are no longer barriers as technology has overcome many of the constraints that have historically controlled growth in a resource poor environment. Technology, coupled with the omission of environmental values in planning and development strategies, are the principle causes for the deterioration of an island's environmental quality (McEacherin and Towle, 1974). Subsequently planning for tourism in these vulnerable areas has taken on new

importance for both the conservation of the resources and the perception of the changing character of these areas in the eyes of the residents (Perdue, Long and Allen,1987).

Another characteristic of islands is their relative isolation. With this insularity comes suspicion of new ideas, especially ideas that appear to be introduced by outsiders (Broadus, Pires, Gaines, Bailey, Knecht and Cicin-Sain, 1984). Therefore in conjunction with the implementation of new policies and procedures the public must be encouraged to understand and accept the rationale behind them. To meet these objectives it is essential that the needs and concerns of the residents be accommodated including traditional activities such as farming and fishing.

Block Island is an example of an environmentally sensitive tourist area. As with other coastal communities in the Northeast, Block Island has experienced a growing demand for residential, commercial and tourist related development. In a NOAA/Sea Grant Marine Technical Report (#89 The Social and Economic Impacts of Tourism on Block Island: A Case Study by Patt Manheim and Timothy J. Tyrrell) the authors conclude that Block Island is nearly fully dependent on its tourist industry. Although tourism employs 650 full and part time workers including 150 residents, and attracts approximately 500,000 visitors during the three month season, Block Island's limited resources must support not only the tourism industry but a year-round community as well.

As in areas experiencing similar types of development, community special interest groups have often disagreed on community goals and the ideal level of tourism. Many islanders see

tourism as loss of control over their daily lives while business leaders perceive such concerns as barriers to improving the island's economy and services. Consequently the increasing demand for the island's resources has led to conflicts among competing users and has illuminated the need to formulate management measures to both protect and allocate the island's resources. The report goes on to say that although the town receives revenues from tourism in various forms, many of the financial, social and ecological costs are borne by the town and the year-round residents.

Tourism development is justified on the basis of economic benefit while it is challenged on the grounds of social, cultural and environmental destruction (Liu and Var, 1986). Block Island is not alone in its quest to maintain a quality lifestyle and environment. A review of the literature demonstrates that development may be shaped by people and conditions from well outside the cultural heritage of the community. Many areas are committed to development and expect conflicts among the competing interested groups. Development alternatives aimed at a sustained yield resource should be planned and proposed in place of projects that would have greater negative impacts on the social and physical aspects of the area. Given the increasing demand for recreation and tourism in coastal areas there is a growing need for guidelines for environmental planning for tourism that incorporates residents' attitudes and perceptions.

This study evaluates residents' opinions on various aspects and impacts of tourism as a means of incorporating community reactions into tourism planning. Through analysis of resident perceptions and

attitudes the study will illuminate the degree of resident community agreement on planning issues such as purchase of land by non-residents, zoning, the importance of tourism to the local economy and standard of living, maintaining a quality environment, and will generate a prioritized list of issues residents feel need attention. This study will examine the relative importance of the three main impacts of tourism (social, economic and environmental) by measuring residents' perceptions and attitudes. It will also illuminate residents' perceptions of; sources of major impacts, key planning issues and priorities, desired mitigation strategies and finally the importance of residents' attitudes and perceptions in the formulation of community acceptable tourism development plans.

Hypothesis

It is hypothesized that the year-round residents of Block Island have formulated attitudes and perceptions of tourism that when solicited and analyzed will prioritize the major issues and concerns within the three individual categories of impacts (economic, social and environmental).

It is also hypothesized that when resident's attitudes and perceptions regarding the impacts of tourism are analyzed in a holistic manner, protection of the environment will rank as a major issue among other expected benefits of tourism. Also maintaining the Islands' character is not only more equitable to the year-round residents with respect to the quality of life they seek to maintain, but in their best interests as it will draw the type of tourist that will be environmentally and socially conscious.

Several assumptions underlie the hypothesis.

1. There are indeed impacts, positive and negative, associated with the development and/or expansion of tourism.
2. It is assumed that the year-round residents of Block Island, a well established and mature tourist destination area, are aware of the positive and negative impacts and trade-offs associated with the tourism industry.
3. Residents' perspectives and attitudes regarding the impacts of tourism can be measured and quantified. Also that the responses given accurately reflect the attitudes of the residents of Block Island concerning the direction the community should take regarding tourism.
4. It is also assumed that through the analysis of resident perceptions and attitudes the study will illuminate the degree of resident agreement or disagreement on issues regarding tourism and its associated impacts on the community, and the issues can then be prioritized in terms of how they should be integrated into the planning process.

The focus of this research is to identify residents' perceptions and attitudes regarding tourism and its associated impacts on the community of Block Island. Therefore the impacts of the Island's numerous special interest groups on the direction that development and growth on Block Island is taking have not been individually identified or defined. However as seen in the respondents' background information a large percentage of the Island's residents do indeed participate in the Island's planning process and therefore

their views reflect the true sentiment of what the Islanders want and need.

The section that follows describes the methodology employed to conduct this research including a description of steps taken to formulate the survey instrument, sample selection and techniques used for data analysis.

Methodology

Data used to assess the hypothesis was obtained from responses by Block Island residents to a survey instrument regarding the impacts of tourism on the residents of the Island (Appendix A). The survey was designed to measure resident perceptions and attitudes in three major areas associated with both the positive and negative impacts of tourism on the community. These areas are economic, social and environmental. The survey also includes a limited section on resident perception regarding the local government's ability to effectively deal with tourism and a series of eight open-ended questions regarding tourism soliciting written responses.

The survey design originated from the following sources. First, a literature review of tourism and more specifically island tourism covered in some detail the impacts associated with tourism. In particular the survey design parallels that of a study by Liu and Var (1986) assessing the impacts of tourism on the residents of Hawaii. This provided the basis for assessing the impacts of tourism. Second, to take the actual pulse of the residents' attitudes towards tourism numerous day trips to the Island were taken to personally interview both town officials and members of the community at large. Third,

The Block Island Comprehensive Community Plan (Everett, Everett Associates Inc.,1986) also served as a valuable source in identifying resident issues and concerns. This information was gathered during the formulation of the plan, through individual interviews and group discussions with residents regarding Island life. Fourth, another source of Island sentiment is the Block Island Times, and although considered by some residents to be biased in its editorial license, it keeps close tabs on the town issues and concerns and is the Block Island/Town of New Shoreham paper of record. Content analysis of the Times over a one year period provided valuable insight into the issues concerning tourism on Block Island.

The above sources provided the basis for the survey questionnaire. Perceptions and attitudes regarding a particular issue or concern involving an impact of tourism were measured by rating the intensity of agreement or disagreement to a statement on tourism on a Likert-type scale ranging from zero to six. In using this scale an implicit assumption is made that all respondents define the scale points in a similar manner.

A series of socio-demographic background questions concerning Island residency, employment and income was included in the survey instrument. Theory suggests that the socio-demographic background of the survey respondents may prove useful as predictors of how certain issues will be perceived. As a result background information was solicited in an effort to further identify forces that help shape Island policy. Background information also provides a means of assessing the distribution of respondents to account for non-random or skewed results. Also included in the

survey were a series of eight open-ended questions to allow respondents to further expand on the impacts of tourism on the Island and patterns and interactions between residents and tourists.

The survey was pre-tested on ten Block Island residents. Participants included members of the local town government and randomly selected residents. Based on the comments and recommendations of the pre-test, the survey was slightly altered to tailor the questions as they related to resident issues and concerns on the Island.

The completed survey instrument was hand delivered, in a self addressed stamped envelope, to residents of Block Island. Upon a recommendation from the pre-test the surveys were distributed, with a short explanation of the rationale behind it, over a ten-day period to residents entering and leaving the post office and the one general store in the town in the beginning of February 1991. I was advised that if I wanted to encounter the greatest number of residents I would meet them at those locations. Surveys were also handed to residents I met as I walked around the Island. In a ten day-period, which included typical early spring weather, a total of one hundred and forty surveys were distributed. Eighty eight surveys were returned equalling a response rate of 63 percent.

The hypothesis was tested quantitatively using the following statistical tests.

1. Analysis of Frequency: This analysis yielded a mean score to reflect the intensity of agreement or disagreement to the statements.
2. Analysis of Percentage: This analysis provided a percentage of resident agreement or disagreement to the statements.
3. Factor Analysis: Factor analysis refers to a number of statistical techniques; in this study Principle Component Analysis was used, whose main objective is to reduce a large set or matrix of variables to a smaller number of hypothetical variables. Using a table of correlation coefficients (Pearson in this study) as a measure of association between the variables, the data matrix is examined for interrelationships among the variables. The correlation matrix may also show that there are positive relationships among these variables and that the relationship within some subsets are higher than those between the subsets. Factor analysis may then be used to determine if these observed correlations can be explained by a smaller number of hypothetical variables or factors.

In this study the number of factors selected to explain the variation in the matrix was determined by the Scree-test (Cattell, 1965). The Scree-test directs one to examine the eigenvalues, the characteristic roots or number of variables the factor represents or the proportion of variance of the data collection that the factor represents, and stop factoring at the point that the eigenvalues start to level off. The first factor accounting for as much of the variance as possible, the second factor accounts for as much of the residual

variance left unexplained by the first factor and so on (J. Kim and C. Mueller, 1978).

Initially the variables from all three sub-sets (economic, social and environmental) were factor analyzed as one set of variables. This approach enables the researcher to understand the relationships between all variables in a holistic light. The three individual subsets of variables, economic, social and environmental, were then factor analyzed individually to further identify issues of resident concern and priority.

After the minimum number of factors that can adequately explain the observed correlations is determined, the next step involves finding factors through rotation which are simpler and easier to interpret. Rotation takes the variables in the clusters, which at this point may have substantial loadings on more than one factor or contain within them many unrelated parts, and places them into a clearer form that is mathematically equivalent to the initial unrotated matrix. Rotation brings out the important contributing loadings and diminishes the loadings on the non-significantly contributing variables (K. Joreskog, J. Kolvan, R. Reymont, 1976; A. Comrey, 1973). In this study orthogonal varimax rotation was used.

4. Regression Analysis: After the minimum number of factors were identified regression analysis was employed to identify relationships between the factors (the dependent variables) and the background information (the independent variables). The rationale behind this analysis is to measure the dependence between variables in an effort to predict one variable from another. Presumably when variables are not independent, knowledge of one will help in the prediction of

the other. The level of certainty in prediction is, of course, related to the strength of the relationship. The degree of strength of the relationship is measured through correlation.

This analysis cannot be directly used to establish causality. Correlations merely measure covariation or the degree to which several variables vary together. If a significant proportion of the factor scores can be explained by any or all of the socio-demographic background variables then further in-depth studies into the area are warranted. This knowledge is coupled with the fact that the dependent variable occurs last in the time sequence. From this information we can make causal inferences with the assumption that although other variables may also be operating, we assume they have a random effect (Blalock, 1959).

It should be stated here that statistical analysis in scientific research is no different than any other technical aid one may employ. It provides a means of measuring the elements that are involved and of examining the way they are related, but it does not in itself furnish an explanation of the phenomena. The effort to state the hypothesis as a mathematical model, and to reduce the variables to specific numeric statements, definitely related, should force the investigator to think more clearly and definitely about the problem. Methods of analyzing complicated relations may yield unsatisfactory or misleading results if improperly employed. Statistical analysis is not a substitute for careful thinking, technical knowledge and skilled workmanship in research work; instead, it is an aid which may make that thought and skill even more productive of worthwhile results (Ezekiel and Fox, 1959)

Thesis Organization

This chapter has provided insight into the study of tourism and its associated impacts on the Island. It has also described the rationale for this study and identified the study site. Chapter two provides the necessary historic and demographic information on Block Island and is intended to give the reader background information regarding the state of the Island's tourism industry. Chapter three examines tourism theory and its application to the study. Chapter four details the hypothesis and methodology used to undertake the study. Chapter five analyzes and interprets the survey data. Chapter six discusses the results of the analysis, puts forth recommendations and concludes that the study provides support for the original hypothesis.

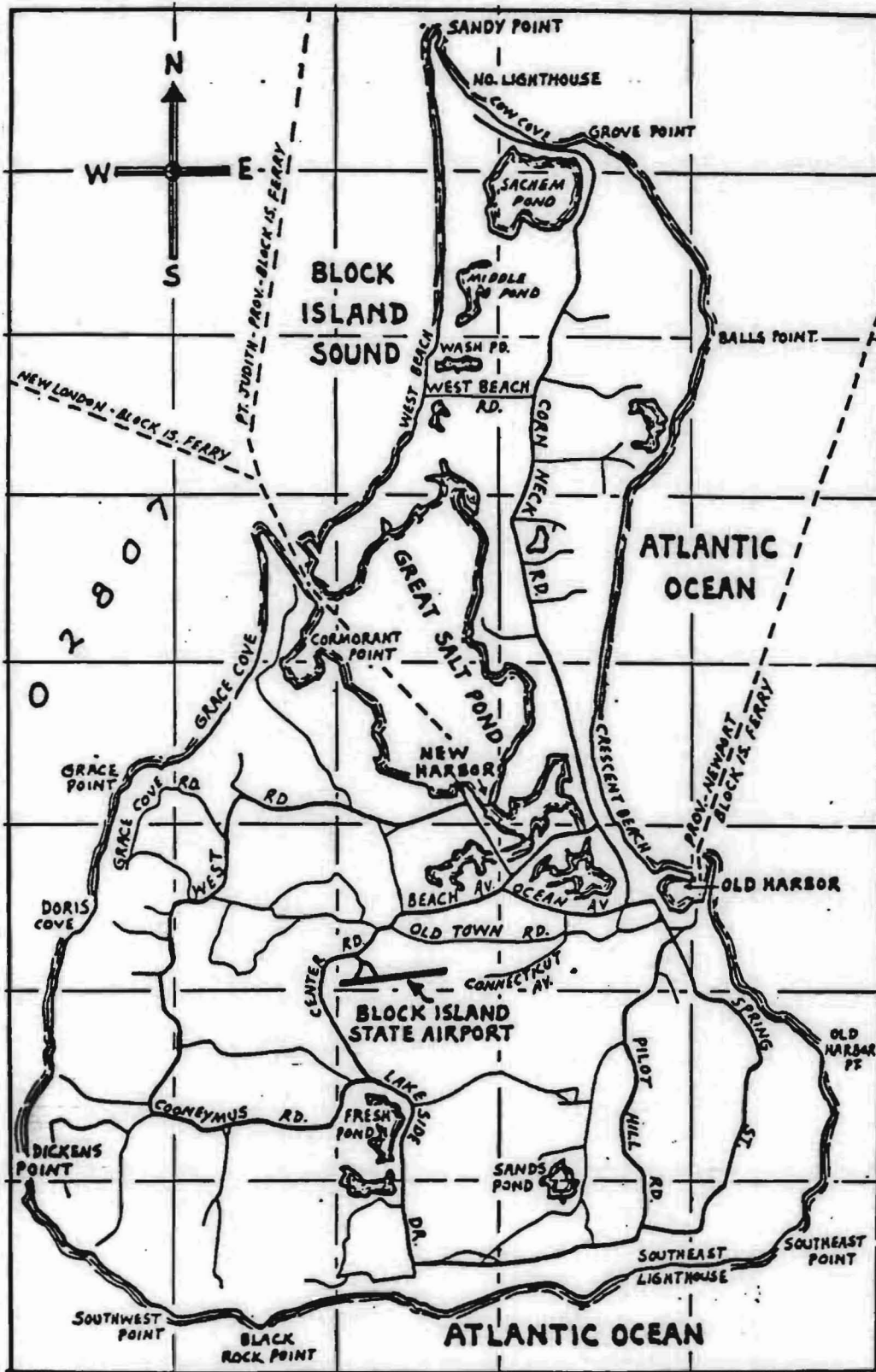
CHAPTER TWO

BLOCK ISLAND: THE STUDY SITE

BLOCK ISLAND

Block Island, advertised as "The Bermuda of the North" by the Chamber of Commerce, is located at the mouth of the Long Island Sound 14 miles east of Montauk Point and approximately 12 miles off the Rhode Island coast. The Island's 6460 acres, ten square miles of land and one square mile of water surface, are a somewhat triangular or "pork chop" shape with a length of six miles and a width of three and a half miles (Town of New Shoreham Town Monograph, 1977). The Great Salt Pond, with access to the sea, separates the top third of the Island from the lower two thirds by all but a narrow strip of land. The pond has access to the sea by a breachway constructed in 1895 and houses "New Harbor", home to three marinas and literally hundreds of moored and transient pleasure and charter vessels during the tourist or summer season. (Figure 1)

The Island, similar to Nantucket, Martha's Vinyard and the islands of the Elizabeth chain, was created as a result of glacial moraine deposits. The geologic diversity of all the islands with their sand beaches, high bluffs, rock deposits, kettle hole ponds, wetlands and fine views of the sea make them all quite similar in physical character. The weather can be harsh with days of high winds or



dense fog, however the sea keeps the Island a little warmer in the winter and cooler in the summer than the mainland (January mean air temperature 32 degrees F, July mean of 69 degrees F). The annual rain fall on the Island is 38.6 inches. This unique island environment enables it to support a host of rare and endangered species of flora and fauna. The uniqueness of Block Island, as is said by many, sets it apart from the rest of the state. This statement applies to the social character of the Island as well as the physical geography.

Block Island History

The original inhabitants of the Island were the Narragansett Indians. Exactly when they first inhabited the Island is not known. They called the Island Manisses, meaning either "Little God" or "Little God's Island", and both cultivated crops and harvested fish from the surrounding waters. Although its early history is somewhat clouded, the first written account of Block Island informs that Varrazano, sailing under the French flag, passed by the island in 1524. He named the island Claudia and reported it was "covered with hills, full of trees and well peopled" (Livermore, 1877). In 1614 Adrian Block, a Dutch Navigator, sailed eastward through the sound "discovering" several islands and giving his name to the last one. The Dutch carried on trade with the Indians but to what extent is not clear. In 1636 an Englishman, John Oldham, came to the island to trade with the Indians. Although it was said he was accustomed to dealing with the Indians he was murdered for one reason or another and his

death was widely advertised in Boston (Sheffield, 1876). This was probably the first time the Northeast settlers became aware of the island's existence. Colonel John Endicott, along with about one hundred men, was dispatched by the governor of Massachusetts to punish the Indians for the murder. Endicott was met by some small resistance as he attacked the island but soon the Indians fled into the woods. Endicott then laid waste to whatever he could find and departed. The island was claimed to be part of Massachusetts by conquest and several years later this claim was acknowledged by the Narragansett Indian tribe. In October of 1658 the General Court of Massachusetts granted title to four men from Massachusetts for various services rendered to the Colony. The island was then sold to a group of sixteen men, most of who constituted the original settlers, for four hundred pounds. Some of these names can still be found in the local phone book. At that time there were approximately 3000 Indians living on the Island. By 1700 there were 300 and by 1774 there were only 51 left. The Island was officially under the government of Massachusetts until it was annexed to Rhode Island in November of 1663. At this time the Island was covered with trees, however by 1714 the town introduced a tree cutting ordinance and for the next one hundred and thirty years, timber having been exhausted, peat was the common fuel (Block Island Historical Society, 1946).

The Island was named New Shoreham, after a town named Shoreham in Sussex England, at the request of its inhabitants in 1672 and continued on with a rich history including battles with the

French, pirates, buried treasure, numerous shipwrecks, rum running and tourism.

For the next two hundred years fishing and farming prospered on the Island and was responsible for most of the Islanders' income. Produce, corn and other grains were cultivated, milled by Island wind mills, and sent to the coastal markets, places such as Providence and New York, as they were nearby and easy to reach by boat. During the mid 1800's, as the country's infrastructure expanded, much of the grain cultivation shifted West and agriculture for export purposes on the Island began to decline. The mid 1800's also saw the Island becoming more of an attractive summer vacation destination.

History Of Tourism On Block Island

The first hotel was built in 1842. At that time there was no scheduled passenger service running to and from to the island. Small vessels brought tourists as they carried on their island trade. As time went on more and more guests came to the Island. As the number of visitors, both wealthy and poor, increased so did the number of accommodations and by the 1880's Block Island had an established tourism industry with a summer season that filled all available accommodations (Benson, 1977). Evidence of this era is quite apparent by the amount of hotels and guest houses, and to some extent residential homes, constructed in the Victorian style.

Tourism continued to expand through Prohibition, as the Island was a favorite rum running destination. By the early thirties tourism slacked off and many Islanders left the Island. The end of

Prohibition enticed less visitors to the island and as the economy became bleak, a slow but steady exodus left the Island's tourism industry in a state of decay. The hurricane of 1938 destroyed the fishing fleet and with agriculture at a low point the last link with traditional ways of life disappeared. Although an economy based on tourism had been a century in the making, the destruction of the fishing fleet removed the last vestige of the old independence (Benson, 1977). In an effort to stimulate the economy of the Island a regular and reliable ferry transport was put into service. As a result of this tourism began to re-establish itself in the late forties.

Initially tourism was confined to the Old Harbor area with tourists staying in hotels, guest houses and the odd cottage. However during the seventies and eighties residential construction for second homes and condominiums expanded throughout the Island. This expansion brought with it increased pressures on the Island's infrastructure and services and also a change in the Island's traditional character. Today visitors to the Island come from all over the nation, however the majority are from Massachusetts, Connecticut, New Jersey, New York and Pennsylvania (Manheim and Tyrrell, 1986). Presently the "tourist season" on Block Island is defined as the period of time from Memorial Day through Labor Day.

The Island has a number of fixed or spectator attractions. Most of them are historic such as the Indian Burial Grounds, Southeast Light and Settler's Rock, while others are natural such as Clay Head. The Island's recreational attractions are the main draw: swimming, sunning, boating, fishing, biking, etc. Other variable attractions such

as sailing events, seasonal bird watching and the annual wine tasting weekend attract an increasing amount of visitors.

Seasonality

Block Island, as many tourist destination areas, experiences seasonal extremes. The residential population of the Island is 836 (1990 census data). The summer population, consisting of summer residents, tourists, boaters and day visitors, may swell upwards of 15000 (Everett, 1986). There are also "shoulder months", spring, when business people gear up for the season and Cottagers "open-up" their houses, and fall when fewer visitors arrive and businesses close down and Cottagers "close-up" their houses.

In a 1986 study on proposed planning concepts on Block Island, by M. Everett of Everett and Associates Inc., there is a quote from the 1977 planning report describing seasonality on Block Island. "Seasonal extremes: Contrasting patterns of life were seen as increasingly polarized by the seasonal arrival of leisure home owners and tourists. The acute population jump was seen as the direct cause of stress on services and a persistent threat to the Islanders' way of life. Many felt strongly that the passing of the older values was decidedly unfortunate and must be resisted. Others, just as vocal, said 'that was life' and 'the old must make way for the new'.

The 1986 Block Island Comprehensive Plan, by Everett Associates, Inc., reports feelings to be more subdued, however residents are concerned with meeting the demands of increased growth, seasonal shifts and the associated demands on services and infrastructure, and the impacts of growth and seasonality on the Island's ecology.

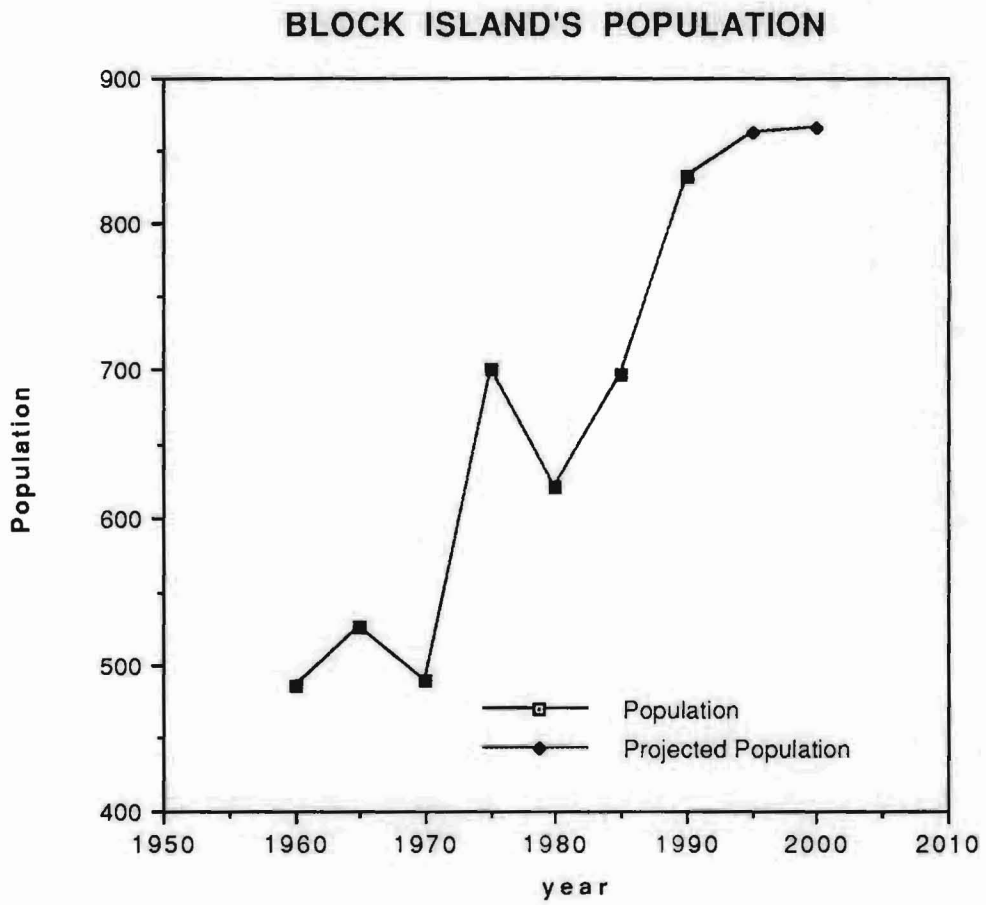
Demographic Profile

An accurate demographic profile of the Island is difficult to construct. Much of the data available comes from the State records most of which are based on the 1980 census. The more recent data comes from several sources including the 1989-1990 edition of Rhode Island Basic Economic Statistics; 1990; Herr Associates, 1991 and The Block Island Chamber of Commerce.

The population of the Island greatly fluctuates depending on the time of year. The Island's winter population according to the State's 1990 census is 836 (Rhode Island Bureau of the Census, 1991) The 1991 Block Island Annual Ground Hog Day or Sam Peckham's Survey identifies a winter population of 832, which is pretty close to the State's and cost much less. These are residents who claim the Island as their primary place of domicile. This figure does not reflect the huge summer influx or mid-winter low. It has been estimated by the Island's town government that the summer population may reach 15,000 on peak days. This places the Island's population density is 83 persons per square mile during the winter and 1500 persons per square mile during peak summer days.

The resident population has shown an increasing trend since the forties. The largest recent growth period was from 1980 to 1989 which represents a 25 percent increase. Based on 1980 data the projected population for the year 2000 is 867 (figure 2.2) Rhode Island

FIGURE 2.



Department of Economic Development, 1989). Among the 39 municipalities in the state, New Shoreham ranks last in population.

According to the 1980 census there were 1009 housing units on the Island, a 34 percent increase over 1970. Of those units 677 were seasonal and 332 year-round housing units. Of the year-round units 54 were vacant 81 rented and 197 owner occupied. Seasonal housing units represent approximately 85 percent of the total units. According to the Rhode Island Builders Association, in the period from 1980 to 1988, 320 new residential housing permits have been authorized. This would put the 1988 number of housing units at 1329 representing a 24 percent increase in units during that period (Rhode Island Basic Economic Statistics, 1989). There are also more than 1600 visitor accommodations in the Island's Hotels, Inns, B&Bs, other rooms etc. (Block Island Chamber of Commerce).

The median family income for 1979 was \$16,694 representing a 101 percent increase over the prior 10 year period. The 1989 median family income was \$32,000 representing approximately the same percent increase. In 1980 the total labor force was 327. Of the civilian labor force there were 182 males and 130 females. During the summer season seasonal employment increases dramatically in response to the seasonal demands of tourists and residents.

The effect tourism has on employment can be seen in table 2.1, produced by Manheim and Tyrrell (1986) in their study on the economic and social impacts of tourism on Block Island.

TABLE 2.1 AVERAGE NUMBER OF EMPLOYEES IN TOURIST RELATED FIRMS BY QUARTER (1984).

Occupation	1	2	3	4
Retail Trade	48	101	220	82
Services	28	125	425	58
Transportation	29	56	90	18
Total	<u>105</u>	<u>172</u>	<u>735</u>	<u>158</u>

This effect is further demonstrated by more recent data compiled by Herr Associates, 1991. Table 2.2, Block Island Employment (representing 1990 data) shows two thirds of Island jobs involved in retail and services. The remainder of the employment opportunities are in one way or another dependent on serving population or population growth.

TABLE 2.2 BLOCK ISLAND EMPLOYMENT (1990).

Annual Average		Slack and Peak Months	
Construction	60	All Industries	
Transport and Utilities	60		
Retail Trade	230	February	230
Services	230	August	1200
Government	50		
All Others	10		

In terms of economic growth in 1980 there were 75 firms with 292 average monthly employees and a yearly payroll of \$2,172,828. In 1988 there were 114 firms with an average of 607 employees per month and with yearly payrolls of 8 million. In their 1986 report

Manheim and Tyrrell found 86 percent of the Island's firms directly involved in serving tourists. This would represent 98 of the 1988 firms. Tourism is without a doubt the economic force on the Island.

In 1980 the educational attainment of persons over 25 years of age showed 79 percent to have completed high school and 27 percent to have completed college. Compared to the other 38 municipalities of Rhode Island New Shoreham ranks 5th and 3rd from the top respectively.

As of 1988 there were 1,019 passenger cars, 459 motorcycles, 383 light trucks and 111 heavy trucks and busses for a total of 1972 registered motor vehicles on the Island.

RESIDENTS, VISITORS AND TOURISTS

Residents

The residents and visitors of Block Island are categorized into the following groups by the 1986 Block Island Comprehensive Plan. The groups as a result of their differences in length of stay, reasons for visiting/residing on the Island and differing needs all of which have different impacts on the Island.

Old settlers:

Those on the Island since birth and "who culturally identify with the Island, whose lineage often extends back several generations, and who usually live of the Island all or most of the year."(a quote from the 1977 Block Island Comprehensive Plan reprinted in the 1986 Plan).

New Settlers:

Newer residents that make up a significant percentage of the population including many who were originally seasonal residents that now spend considerable time on the Island. This group, not brought up on the Island, bring off-Island values and personal expectations that conflict with the traditional Island ways.

Cottagers

Summer folk, home owners or renters who visit the Island during the summer, add to the resident population by an estimated 2500 (Manheim and Tyrrell, 1986). Many of these residents attracted by the Island's natural and cultural uniqueness have built second homes or renovated existing ones. Many of the Cottagers are from out of state and only stay during the summer and on fall and spring weekends. As construction costs and rents increase and the economy slackens these units are rented out more and more of the season. However there remains a persistent demand for houses and land on the Island. It is from this group that the New Settlers evolve.

TOURISTS AND VISITORS

Tourists are defined as those who use over night accommodations (staying more than one day) whereas visitors stay for less than 24 hours. The Island's facilities can accommodate 1600 visitors a night and during the season have an estimated 95 percent occupancy rate in the Island's estimated 35 hotels, B&Bs, apartments, etc. A 1985 estimate of numbers of tourists visiting the Island was 123,144 (Tyrrell and Manheim, 1986). The needs of this group are quite diverse and range from hiking and bird watching to more sophisticated facilities and entertainment.

Day Trippers

This group arrives and returns by ferry in the same day. Most embark from Point Judith. This group consists of the largest number of visitors with easily over 2700 arriving per day (Herr and Associates, 1991). The numbers continue to rise as a result of the increasing number, size and frequency of ferries serving the Island. Manheim and Tyrrell (1985) estimate the number of Day Trippers visiting the Island to be 145,908 in an 84 day season. Herr and Associates (1991) estimate of 2700 Daytrippers per day would place this number at 226,800, a 64 percent increase in five years.

Known best for their desire to rent and ride mopeds full throttle around the Island with little regard for man nor beast this group is blamed for most all maladies on the Island. They are also considered minor contributors to the economy, major contributors to congestion and the force behind the degradation of the natural beauty of the Island.

Mariners

Block Island is a popular destination for pleasure boaters and weekend sailors from Long Island to Cape Cod. The harbors may host as many as 800 vessels per weekend day, with 3.7 people per vessel, adding 3000 visitors to the Island per weekend day. This group contributes to the economy as it uses various marina facilities, taxis and rental cars and frequents restaurants and bars. The growing number of boat borne visitors is placing increased pressure on the harbors in terms of their ecology and management needs.

Service Personal

This group is composed of Islanders and summer workers who provide the services required to keep the Island working. They include fishermen, tradesmen, teachers utility workers, government personnel etc.

Business People

Defined as both year-round and seasonal proprietors, and their help, this group runs the hotels, marinas, shops, restaurants, etc. This group consists of both Island and off Island interests with specific commercial needs and problems.

Government Structure

The Town of New Shoreham relies on the Town Manager, First and Second Warden as well as three Town Council Members to set Town policy, serve as Probate Court and oversee the running of the Town. The First Warden, assisted by the Town Clerk, administers the Town business as directed by the Town Manager and Town Council

Members. The Town has an Annual Financial Town Meeting where residents of the Town review and pass the Town Budget.

There is a tremendous work load involved with keeping abreast with Island development, Town services and following up on recommendations and special situations. To deal with this the Island has adopted a practice of appointing committees, commissions and other types of special groups to review, regulate or study some aspect of Island life (of the survey respondents seventy two percent belong to one or more of the over forty individual civic groups that were identified). These groups are supplemented by a large number of residents appointed to positions that help in the management of Island affairs. Traditionally these appointed or elected officials have come from the Island's Old Settlers however more recently they are composed of both old and recent residents (Everett, 1986)

Town Officials, which support the Town administrators, are elected for a term of two years. They include; Town Clerk, Treasurer, Assessor, Tax Collector, Building Inspector, Harbor Master, Wharfage Collector etc. The Town has the following standing boards; Planning Board, Zoning Board of Review, Harbors Commission, Conservation Commission, Historic Commission and Taxi Commission to name a few.

Services And Facilities Provided By The Town

-The Police Department has several full time officers that are supplemented by reserve officers and temporary summer help.

-The Fire Department is an all volunteer department with a number of pumper and rescue vehicles. As with the other Town Departments the summer season creates special protection problems.

-Town Communication Center staffed at all times is the central call receiving facility for all police, fire and emergency calls.

-Civil Defense, in the case of severe weather, is critical on Block Island. These procedures move people and belongings to safe areas during severe storms and assist with the securing of boats and materials in the harbor.

-The Town Hall provides the community with offices, meeting places and record storage.

-The Island Free Public Library is open year-round.

-The Block Island School combines all grades and provides other benefits to the community such as a Town meeting place and a community sports and recreation center.

-Medical Facilities consist of a health clinic with a staff of one doctor and one nurse. They are supported by the Rescue Squad which is funded by the Town and staffed by resident volunteers. These services are stressed in the summer.

-Highways or main roads on the Island are, for the most part, owned by the state which maintains a public works facility on the Island.

-The Airport and the land it sits on are also owned by the state. The state also owns land for conservation purposes the largest of which is the state beach with its new recreational facility.

-The Town holds land for its public buildings as well as beaches.

-The Post Office, the Coast Guard's lighthouse facility and its facility at the entrance of the Great Salt Pond are Federal properties. The Post Office also serves as a social gathering place for the community as most of the Town turns out there in the late afternoon to pick up their mail. The service is, for the most part linked to the mainland by the ferry service.

-The sewer system (Waste Water Treatment Plant) initially built to address the needs of the Old Harbor and commercial area was expensive to construct and has since reached capacity. It is perceived as a direct link to the development issue by many of the residents.

PRIVATE SERVICES

Essential services provided to the Island include the following.

-Public boat service has provided reliable daily service for several decades. Recently the daily frequency of trips during the tourist season has increased and includes the use of larger boats. Air Transportation is provided by two airlines and a number of private planes. The single strip runway is in use constantly during the summer season.

-Water utility is provided to part of the Island by The Block Island Water Works. The remainder of the Island draws its water from individually owned wells.

-Solid Waste Management is carried out at the Town Transfer Station where waste is transferred off the Island by ferry.

-The Block Island Power Company provides electric power to the Island by diesel generators. The peak demand during the summer season continues to increase as the Island expands its services.

-Telephone and Cable TV service is also provided to the Island by private companies.

-The Block Island Times, the Island's only newspaper, is published weekly except from Memorial Day to Labor Day when it is published bi-weekly. The Times is also designated the Island's "paper of record". Tourism-related articles remain high and address numerous community concerns such as public services, zoning, waste disposal, water, sewers, health care etc.

Growth Issues And Concerns

In 1986 Manheim and Tyrrell analyzed the contents of the Block Island Times to develop a profile of community attitudes towards tourism. Over time as the tourist population increased, they identified not only an increase in the number of tourism-related advertisements but also a change in the focus of community concern. Greater attention was being paid to the impacts resulting from the increased numbers of tourists and residential development. As the community's services became overtaxed growth became the issue. The community had to decide how to balance development and the need for additional services with the need to preserve open space and the environment in a atmosphere that often found the various

interest groups in the community differing as to what extent tourism should be promoted on the Island.

Growth management is probably the one central issue regarding tourism on the Island. It identifies residents' concerns for better controls related to the changes occurring to the Island and its way of life and for the ultimate carrying capacity of the Island. Depending on individual interest in an issue, there may be several schools of thought and perspectives regarding that issue. Therefore only the issues and their potential impacts will be listed and not the various arguments that support or reject the individual points of view regarding the issue.

Following is a brief overview of the issues and concerns that have been identified by previous studies (Everett, 1977; Everett, 1986; Herr Associates, 1991). It should be noted here that most, if not all, of the issues and concerns identified by the above studies have been acted upon.

TRANSPORTATION

Transportation to the Island by a public carrier, ferry service, is normally the way tourists arrive. The bulk of the visitors depart from the State Pier in Point Judith on the Interstate Navigation Route. The service has seasonal increases in departures and uses larger vessels contributing to a drastic increase in the number of passengers and vehicles ferried to the Island in the summer months. Ferry service to Old Harbor also originates from Providence and New London with less frequent departures from Newport and Montauk

Point. Increasing ferry capacity at any one of these points could be done with relative ease.

The issue with the ferry service is the increased numbers of visitors, especially day trippers who arrive and depart in the same day, and vehicles being able to come to the Island. A reduced fare for same day round trip provides incentives for the increased number of day trippers while the cost and risk of parking one's vehicle in Point Judith contributes to the increased number of tourists who bring their vehicles to the Island, thereby contributing to the already congested road system. As would be expected both the points of embarkation and disembarkation get quite congested and give the appearance of an invasion. Old Harbor is especially affected as it is located in the heart of the one and only commercial node of the Island. Issue has been taken with the ferry company regarding the winter schedule, freight and passenger rates and number of daily trips during the summer and is still under discussion.

Another source of transportation to the Island for visitors is air service. The State Airport is the second busiest in the State and it is forecasted that demands for its use will continue to increase. Air transportation is provided by four airlines that carry both passengers and freight. New England Airlines provides a scheduled year-round service while the others offer charter service. Private airplanes also land at the Island airport.

Pleasure and charter boats are the third way to get to the Island. This form of transportation has been partially responsible for easier and increased access to the Island. These boats can add up to over

3000 visitors a day and they tend to overwhelm the harbor and its facilities. Subsequently there is congestion not only in the streets but the harbors as well. Issues have also been raised over the visual appearance of the harbors and lack of spatial organization in the dock areas with regard to freight, passengers, signs and facilities. Increased growth of the number of boats reflects the need for expanding marina space and increased maintenance of channel widths. Too many boats are perceived as pollution generators and cause congestion in both harbors as the Island strives to accommodate all types of recreational and commercial craft. However there is little chance that the carrying capacity of the Great Salt Pond will be able to accommodate much more than the approximately 2000 boats that utilize the pond on weekends during the peak season.

Once on the Island vehicle transportation includes cars, trucks, taxis, heavy equipment, mopeds, bicycles and pedestrians. The Island has some 40 miles of roads. Just under three quarters of this system is State owned and controlled. The Town has jurisdiction of the rest which includes four miles of paved road. Herr Associates (1991) estimates 10,000 motor trips are made on the Island per year and the RIDOT estimate that 9000 of those trips include mileage in the commercial district.

Mopeds top the list of island transportation issues with accusations of speeding, high accident rates and trespassing. The introduction of mopeds in the late seventies stimulated a tremendous amount of controversy. Some residents saw this as a threat to their privacy, safety and control of the Island. Others saw it as a positive

economic opportunity. This one issue generated numerous law suits on behalf of the residents seeking control over their lives and business owners perceiving such regulation as a barrier to improving their lives and that of the community as a whole. How to physically separate the various forms of transportation and thereby lessen congestion is a concern. Bikes need bike paths, pedestrians need sidewalks, everyone needs parking and the heavy trucks impact the road system.

HOUSING

Another growth issue is the number of new houses contributing to the contamination of the ground water and to the deterioration of the visual beauty of the Island as everyone, in an attempt to gain a water view, builds on the high ground. The high cost of construction or renovation encourages owners to rent their houses causing an increase in the number of cars filled with tourists expecting many amenities and capable of paying very high rates. The high cost of property and rentals make it very difficult for Island families that must rent. The Rhode Island Department of Administration, Division of Planning estimate that the annual income required to buy an averaged priced home on the Island to be \$103,000. The 1989 median family income on the Island was \$32,000. As a result of the real estate boom the cost of a first house or buying a home for a young family is prohibitive in most cases. Summer folk, as a result of the high price realty market on the Island, are opting to rent their houses for the summer season only instead of seeking a year-round renter. It provides one with a sizeable profit in a short period of

time and does not require one to maintain the unit during the winter. This has led to a housing shortage and demands that more affordable housing be available to year-round folk. This issue is being addressed.

ACCOMMODATIONS

An increase in the number of accommodations and other tourist facilities will add to the tourist numbers on the Island and stress the system to a greater extent. The costs for services required to support an increase in the number of accommodations are made higher by the Island's diseconomies of scale and geographic location and will add to the financial burden placed on the resident community. However there is a substantial proportion of the Island economy that depends not only on the level of tourism generated activity but on its continued increase. Herr Associates found 28 percent of the Island's winter residents supported by the construction trades. Realizing the Island's physical limits for construction and expansion of accommodations this could prove to be a greater problem in the future.

UTILITIES

Increased growth will increase the pressures on the water, sewer, power, waste disposal services, etc especially during the peak season when they are already stressed. Concerns of how to continue maintenance and further expand these utilities have been raised.

PHYSICAL CHARACTER

The degree of change to the landscape, one that has evolved over several centuries, that continued growth will cause is a concern to the residents of the Island. The visual, structural and spatial make up of the Island is also what attracts many visitors to the Island and should not be extremely modified. Therefore maintaining the natural character of the Island concerns all residents. Islanders feel that the need to conserve the Island's natural integrity, which is a mix of stone walls, ponds, fields, wet lands, thickets etc, is important not only for wildlife but from a cultural perspective as well. Also much of the Island receives its water from the aquifers that are fed from the Island watershed. Included in this issue is maintenance of access rights to the water.

SOCIAL CHARACTER

Increased land prices, new off-Island residents moving in and a reduction in the numbers of old-time Islanders has made for a new type of Island demographic profile in a relatively short period of time. Herein lies the potential for Block Island to become another high roller enclave with few links to the heritage of the Island.

Other Issues And Concerns

-Land Use Planning: Of Block Island's 6000 acres of land less than 1400 are presently developed, 1700 acres committed to open space or protected by either wet land or coastal zone regulations. This leaves approximately 2700 acres of land that can be developed.

At issue here is the maintenance of land use patterns that the residents desire and feel are best suited for the Island's carrying capacity and its future. Concerns identify the need to address the problem administratively to establish guidelines and consistently applied standards.

-Administration: The Town is experiencing a change from a rural way of life and administration of Island affairs to a more regulated and bureaucratic form of government. As decisions become more and more complex and certain standards need to be met, there is a concern for maintaining a government structure composed of individuals that have a feeling for the Island's heritage and character.

-Education: Education is an issue that evokes discussion in any community. There is much concern with regards to the direction of the school in future years. The projection of the school population is at the crux of the matter. Presently the public school enrollment is growing, up 53 percent over 1980. However in the long run if the Island gentrifies and the younger families can not keep up with the rising cost of living, forcing them to leave the Island, then the school may not have enough students for the minimum requirements to meet the educational standards mandated by the state.

-Tourism and Business: The Island's various tourism and business associated interests differ in their perspectives in how the Island should be developed. All tend to feel the Island should accommodate their particular interest and each distinct group is quite vocal about any potential threat to the activities in which it is engaged. The non-commercial population of the Island understands the Island's economic dependence on tourism but prefers not to attract any more visitors to the Island than necessary. Residents' views on tourism span the complete spectrum. There are those that want to increase the numbers of tourists and length of the season. There are those that feel ten weeks is enough and others that feel the season should be extended into the shoulder months and some thinking that year-round tourism is the answer. Some residents feel that the Island should try to encourage the eco-tourism approach where the tourist comes to learn about the Island's unique ecology. Others want to be able to make a living with no dependence on tourism whatsoever. There is one major area of agreement and that is the desire to control tourism so as to inflict as little environmental, social or economic damage on the Island as possible.

-State and Local Relationships: Block Island's geographic location and unique set of issues places it out of the mainstream of the state government decision making processes. This can have repercussions that affect the Island's economic base and way of life. The Island's input into the decision making process regarding tourist access to the Island is not considered to be adequate. The state does not consider the special problems and circumstances that are unique to the Island

and yet expects the community to be able to manage as other communities do.

-Historic Preservation: The Island's historic character lends much to its charm and uniqueness. Resident concerns regarding the historic preservation of the Island are evident by the active Historical Society and Historic District Commission. The Commission monitors any construction, renovation or sign changes made in the Old Harbor area which has been proclaimed a historic district. The Historical Society maintains a small museum and promotes the Island's unique past through a number of educational efforts.

-Conservation: Block Islanders, for the most part, are committed to conservation and preservation and a number of pro-environmental groups exist on the Island. The Island is a haven for numerous rare and endangered plant and animal species and was recently placed on the Nature Conservancy's list of one of the twelve "Last Great Places" in the Western Hemisphere. Public or conservation ownership of land accounts for almost twenty percent of the land area. Of course there are those who feel that too much of the Island is being conserved and more should be allowed to be developed.

As described above Block Island is an island with a rich history and heritage. The tourism industry which began 150 years ago is now the dominant force behind both the economy and growth of the Island. The issues and concerns facing Block Island today are very similar to those facing other tourist destination areas, especially islands. The following chapter explores various aspects of tourism

theory and provides a background for the interpretation of the analysis and discussions of the survey data.

CHAPTER THREE

THE IMPACTS OF TOURISM: THEORY

Definition And Nature Of Tourism

The International Association of Scientific Experts of Tourism define tourism as the sum of the relationships arising from the travel and stay of non-residents provided that they do not lead to permanent residency and is not connected with any permanent or temporary earning activity. The temporal character of the relationship distinguishes the relationship between tourism and migration and in essence is linked to leisure and forms of recreation.

There is however a difficulty in differing between the various forms of travel. The above definition implies a purely consumptive trip and aside from being linked with leisure and recreation tourism, conceptually, it could include business travelers, commuters, students, visiting friends and relatives, etc. Although tourism and leisure overlap there may often be a distinction between the two, the difference being that part of tourism may be associated with working time and leisure time may be enjoyed at home. The term recreation is also frequently substituted for tourism and the two, as with leisure, do indeed overlap. However they are not mutually inclusive.

For example one may recreate at home, not associated with travel, and recreation does not always have the implicit commercial connotations that tourism does.

Broken down further the World Tourism Organization uses a two part definition for tourism, tourists and excursionists. Tourists stay for at least 24 hours and excursionists for less than 24 hours. This in practice means excursionists do not stay overnight whereas tourists do. This overnight criteria has gained a wider acceptance with regard to distinguishing between the two groups in considering the economic impact of a trip with an overnight stay or a trip of less than 24 hours (Mieczkowski, 1990).

Although it can be difficult to distinguish between the different types of travelers an important aspect in this study is the resident's perceptions of the impacts of tourism and the linkage of those perceptions to the various types of tourists visiting Block Island.

Types Of Tourism

Smith (1989) describes five types of tourism undertaken by tourists and although overlap between some of the types of tourism exists the broad definitions are useful for discussion with respect to tourism on Block Island. Ethnic tourism is described as visiting indigenous and often exotic peoples to observe villages, dances, ceremonies etc., far off the beaten path. These types of tours attract a limited number of tourists and have minimal host-guest impact. Cultural tourism includes the observation and photographing of vanishing life-styles that lie within human memory. Cultures with old style houses and residents that still use non-mechanized ways to

farm etc. as in rural Europe or the Amish of Pennsylvania fit this description. As a result of the easy access to these areas and the large number of tourists, host-guest stresses may be maximal. Historical tourism tends to attract many education-oriented tourists and generally includes the museum-cathedral circuit. Many of these include guided tours and are easily accessible from large cities. The local tourist industry is described in this context, as "institutionalized" and is primarily economically motivated with little social host-guest interaction. Environmental tourism, related to ethnic tourism, is primarily geographic and may include trips to destinations such as Antarctica or tours of man-made environmental relationships or adaptations such as tea gardens or other local industries. Host-guest contacts vary widely and must be assessed on a local level. Recreational tourism is described by Smith (1989) as sand, sea and social. This type of tourism includes beaches, golfing, ski slopes etc. and attracts tourists interested in relaxing, communing with nature or other various activities. Host-guest relationships vary widely but may be influenced by seasonality, imported labor, massive influxes of tourists and radical changes in land values as favored sites are converted to more profitable uses. Examples of this type of tourism occur in coastal areas.

The various types of tourists described above have several common denominators. Understanding why people travel and what activities they participate in while away from their home environments enhances understanding and planning for the impacts caused by tourism. For the most part people want to get away from it all. Gray (1970), Crompton (1979) and Pearce (1990) all identify a

break from routine and a physical change of place as the main motivational factors for tourism. These factors simply require a destination that is physically and socially different. This different environment with its associated different faces, lifestyles, behaviors and attitudes also allows the vacationer to vary from their day to day routines and behavior. As a result tourists may be more relaxed and carefree in a different setting. This aspect in itself can have negative social impacts on a host community. Crompton (1979) concurs that holiday attitudes allow for regression or less constrained behavior while Gottlieb (1982) suggests that upper and middle class Americans relax many of the social constraints of their home environment while on vacation. Conversely she describes others as elevating their social positions in the social order with more extravagant than normal spending and exhibiting attitudes of social superiority. Local perceptions of servitude and an unequal distribution of the economic benefits of tourism may evolve into hostile attitudes towards tourism within the host community

In assessing the motivation to travel three key elements have been identified as prerequisites; leisure time, discretionary income and positive local sanctions (Smith, 1989; Mieczkowski, 1990). As will be discussed all three elements are essential and have direct impacts on resident attitudes towards tourism. In short the amount of leisure time has been increasing with many positions offering longer vacations and recently longer weekends are available a result of several holidays being observed on Mondays. This coupled with early retirement and longer life expectancy for older Americans with

substantial pensions and investments makes for a greater number of potential tourists.

Positive local sanctions are closely linked to the type of travel to be taken and ultimately the destination. Spending money on second homes, initially as a tax write off, and hobbies such as skiing and sailing are socially acceptable and carry a stigma of success.

The impacts of tourists and their behavior in a different environment may color the host community's view of tourism. Leisure time allows tourists to enjoy themselves in an area while residents must continue working and put up with the disruption in their daily lives. Discretionary income, money not needed for essentials, enables tourists to enjoy a quick escape to a second home in a favorite location. This is especially true of two income households.

The Tourism Industry

Tourism by most definitions involves a temporary visit to a geographic area by persons seeking a change or experience different from their normal routines. The fact that tourists choose an area to visit implies a uniqueness in the setting of that area (Knopp, 1980). The lure could be cultural, historical, environmental or a combination. Quite often, and in the case of Block Island the uniqueness, is the natural beauty. Subsequently most individuals, residents and tourists alike, will argue that a particular area is indeed worth protecting from any impacts that will lead to degradation of the area.

As mentioned previously there are numerous types of tourists. Some are demanding and insensitive and there are others whose attitude and behavior enables them to not be thought of as tourists at all by the host population. However one characteristic applies to all tourists and that is they are not residents. Residents depend on the surroundings for considerably more than the vacation experience and as a result their perspectives contrast to those of the tourist with regard to the social, economic, cultural and environmental status quo of the tourist destination area. The fact that the area of concern is in their back yard makes the effects of land use decisions that much more intense and immediate for residents and especially year-round residents (Knopp, 1980).

Aside from the provision of tourist facilities such as hotels and eating accommodations a broad range of supporting services are also required to develop and maintain a tourist industry. Souvenir shops, sporting goods stores and other sundry establishments, although used by residents also, are mostly seasonal and therefore cater to seasonal demands only. The higher order services such as yachting stores are often and high-priced clothing stores are solely to accommodate the tourism industry.

Infrastructure to support the above mentioned facilities is also needed. Roads, parking areas, utilities, etc. which serve the resident population also must be expanded to support the tourism industry. The point is that although the infrastructure is essential it costs to expand it and with few exceptions it does not generate revenue directly.

The development and maintenance of the above mentioned accommodations and infrastructure require the involvement of both the public and private sectors. The private sector's motivation, from the Mom and Pop store to the resort developers, is profit. There are however other players that are not directly involved in tourist operations such as the second home buyer that sees the home as an investment and a place to spend leisure time. Private non-profit groups like historical societies, preservation committees etc. that are responsible for museums, historic sites and other tourist attractions are also involved in the tourist industry, albeit indirectly (Pearce, 1989).

The public sector becomes involved in tourism for a number of reasons and is usually part of a broader program or plan (Pearce, 1989). The public sector is not a single entity with a specific set of objectives and ideologies. It is made up of both public commissions and private interest groups which include interests that range from tourism promotion and expansion to those totally opposed to tourism in any fashion. It may on one hand promote tourism expansion through the provision of infrastructure, a development plan or fiscal incentives but it is also responsible for protecting and conserving the physical, social and environmental integrity of the area.

Impacts Associated With Tourism

The nature of tourism, as seen above, is that it is a multi-dimensional beast. Tourism in any form causes changes which in turn have impacts on residents and the environment in a tourist destination area. These impacts can be both positive and negative and are generally broken down into three categories economic, social and environmental.

ECONOMIC IMPACTS

The economic impact of tourism is significant. For several years tourism has comprised approximately 5 percent of the world's trade and is second only to oil and oil related products as the largest item of international trade (World Tourism Organization, 1987). In 1986 in the United States travel receipts from foreign and domestic tourists totaled \$269 billion, of which domestic tourists spent \$257 billion. This contributed 6.4 percent of the Gross National Product and generated 5.3 million jobs (Travel and Leisure, 1987).

Economically speaking tourism is generally positive for a destination area, consequently it is usually the economic argument regarding tourism that is put forth by its proponents. In lesser developed countries and in rural districts of developed countries tourism is used as a development tool to boost local economies especially in areas with unskilled labor or areas with few other employment opportunities. Studies where the impacts of tourism are seen as positive by the residents were mostly in developing countries or regions where tourism is relatively new (Murphy, 1983;

Liu, Sheldon and Var, 1982 ; Cooke, 1982; Inskip, 1988). Other studies carried out in more mature tourist destinations show greater negative perceptions associated with tourism and its impacts (Allen, Long, Perdue and Kieselbach, 1988; Edwards, 1987; Milmam and Pizam, 1987).

As a service industry tourism is labor intensive. Consequently one of the major impacts of tourism is job creation and usually at less of a cost than in other sectors of the economy (Taylor and Carter, 1980). These jobs are generally low wage and seasonal but in many cases this is compensated for in tips, also tourist areas tend to retain these jobs in changing economic times (Pearce, 1989).

Tourism related infrastructure attracts new non-tourism related industries increasing employment opportunities and broadening the local and regional tax bases as well as the economy. Additional related benefits such as improvements of local facilities that may serve as amenities for the local population are by-products of industrial expansion (Burkhart and Medlik, 1974).

Another positive economic benefit is that expanding tourism in an area leads to the creation and diversification of markets to accommodate the needs of the tourists. Tourist dollars go through almost every branch of the local economy. In addition to money spent by tourists for goods and services investments made by external sources and government spending have a similar effect on the local economy (Kaul, 1985). This form of impact on the economy is called the multiplier effect and is produced by the way in which tourism related expenditures filter throughout the economy stimulating other sectors as it does so. In theory every dollar spent

in tourist businesses enters the local economy for wages and payment of costs for the expenses incurred to provide the service. The money lost out of the system as costs reflected in items such as imported goods and services or monies paid to outside investors is called leakage.

The multiplier effect is a function of three types of input into the economy, direct, indirect and induced. Direct expenditures include amounts paid by tourists for goods and services. This does not however include the sum of the expenditures, only that which initially stays in the area and is not lost through leakages or savings. Indirect expenditures relate to the direct expenditures remaining in the area and the incomes derived from the successive rounds of circulation, spending and respending, of these funds. During each round more and more leakage occurs. Induced expenditures are the consumer induced spending by tourism-related employees and those in the support industries as a result of additional personal income.

Multipliers are generally categorized and are commonly broken down into four groups; sales, output, income and employment (Kaul, 1985). The tourism multiplier is a measure of the total effect and although they may look good on paper Farrell (1982) and Pearce (1990) point out that the multiplier represents only part of the total picture. It is an entirely economic concept and does not take into account social or environmental costs or benefits.

The net contribution to the economy is but a portion of the expenditures as a result of economic leakages. Inskeep (1988) links the loss of economic benefits in an area with outsiders managing or owning tourist facilities and if the tourist industry uses outside goods

and services instead of locally available resources. Inskeep also suggests that if the facilities are concentrated in one or a few areas of a region economic distortions may take place if economic development is not initiated in the other areas. Farrell (1982) and Pearce (1990) also point out that on small islands where most food, clothing, promotion and other materials must be imported and where businesses are owned by off-island or external interests there are substantial leakages and the multiplier effects of tourism are very low. Second home owners also are a significant source of leakage. Initially the construction of the structure will employ local labor, however many of the furnishings and household goods are brought from the area of primary residence where they are less expensive. Alternately, if most of the input for tourism development can be provided by local entrepreneurs and residents then many of the benefits that arise from tourism development will remain in the area. This is less likely in remote or isolated tourist destination areas.

Although tourism stimulates other sectors of the economy it also competes with them for resources and opportunity costs (Pearce, 1989). Resources devoted to tourism cannot be used in other sectors. Development competes for the optimum development sites, limited water, labor, etc. An example of this is the conflict between the positive economic benefits of tourism and resources such as agricultural land with its decreasing output over time. Brydon (1973) notes that on small islands with a limited growing potential or other production opportunities it is better for public monies to support the development and infrastructure of tourism.

Tourism in any area has a general inflationary effect (Inskeep, 1988; Williams and Shaw, 1988; Pearce, 1990; Smith, 1989; Rosenow, 1979). The laws of supply and demand, vacation spending behavior and businesses trying to make a year's income within a limited season share the responsibility. This fact is exacerbated by the often significant disparity between the spending power of the tourist and resident populations. Housing prices rise as do rental accommodations. Seasonal fluctuations in food prices also occur. Higher costs of living have been identified in resident surveys as a major disadvantage of the expansion of tourism (Long, Perdue, and Allen, 1990; Perdue, Long and Allen, 1987; Sheldon and Var, 1984).

Revenues from tourist expenditures accrue to the local and state economies in the form of tax revenues. In the United States the tax received from each dollar spent on domestic tourism will generate an estimated thirty cents in taxes however the amount actually returned to the local government is a very small percentage of the whole (Mill and Morisson, 1985). Property taxes are especially important to the local governments and in an effort to help pay for the costs of tourism development expanding the second home market is encouraged in some tourist destination areas (Pearce, 1989). (However this strategy is not with its potential negative impacts.)

Revenues from tourism are reduced by costs incurred, such as infrastructure, tourism promotion, road repair, rubbish removal, etc. in developing and maintaining the tourist industry. These costs are especially taxing on local authorities where capital invested by external interests brings little or no direct income and indirect income, in the form of taxes, is largely a long term payoff (Pearce,

1989). It is therefore essential for the tourist destination area not to underestimate the financial costs associated with the tourist industry.

Who Benefits, Who Pays

In identifying which groups are being affected four broad groups are generally formed. First there are those directly involved in the tourist industry such as operators and their employees. Much of the direct returns from tourism are received by this group. The second group is the residents, businesses and services many of which are not directly involved in the tourist industry but whose lives may be affected by tourism or an expansion of tourism. An example of this is seen in the impact on the community in trying to provide for local needs such as affordable housing, sufficient labor pool, adequate police protection and other services during the peak season while the quality of their life is diminished by the large influx of tourists. Although indirect costs are also experienced by this group in the form of tourist induced inflation, diversion of capital and land etc. positive economic benefits are also experienced by this group as a result of the multiplier effect. The third group is comprised of the public and its elected and appointed public authorities. Although occasionally agents of tourism development and expansion this group shares both the costs and benefits of tourism. Costs include extension of utilities, modification of community plans in response to private entrepreneurs or fiscal incentives provided to stimulate private investment (Pearce, 1989). (The difficulty here lies in the fact that the public sector is also concerned with preservation,

conservation and the enhancement of natural, cultural and historic attractions.) Benefits for the public sector are an industry that is little affected by regional or national recessions (Tuppen, 1988) an expanded tax base, employment opportunities and investments by tourist enterprises that benefit other local firms. The fourth group is the tourists themselves. Tourists pay for much of the direct costs such as services they demand and use. Their benefits are not necessarily monetary and their costs are indeed inflated.

Social And Cultural Impacts

Resident attitudes towards tourism and its social impacts vary. Liu and Var (1986), in a study of Hawaii's residents found that residents believed tourism provided many economic and cultural benefits but that tourism may have negative associated environmental impacts. Pizam's (1978) study of Cape Cod residents found residents that were employed by the tourist industry to be more in favor of tourism than those not employed by the tourism industry. A study by Liu, Sheldon and Var (1987) comparing residents' attitudes towards tourism in Hawaii, North Wales and Istanbul Turkey found a high degree of concern with respect to negative socio-environmental impacts but in all cases there is generally a positive attitude towards the commercial benefits associated with tourism. Resident perception was that the negative social impacts go with the package. Knopp (1980) sums it up well in his article about residents' ambivalence of tourism and its associated impacts when he says that "they'd rather the tourists sent their money and stayed home".

Social and cultural impacts, both positive and negative, associated with tourism have been well documented. Smith (1989) identifies several characteristics of tourism that exemplify the differences between the "hosts and guests" aside from the more obvious demographic, social, ethnic and linguistic differences. First the transitory nature of tourism makes for short term relationships between the hosts and guests. This does not allow for an understanding to develop between the two groups. Secondly tourists on vacation are generally less restrained in their actions than they would be in their normal routines and environments. This change in behavior may have several underlying causes such as the guest's need for a change from the mundane, prestige, exploration and evaluation of self, social interaction etc. However the perception of the visitor's behavior by the local population is that of lack of respect for the host population and their ways. This scenario increases the difference between the two groups. Farrell (1982) in his study of tourism in Hawaii finds that visitors often come with pre-conceived images as a result of advertisements or verbal accounts from friends or acquaintances. Promotional advertising tends to emphasize sights, events and leisure activities and downplay the host society. As an example visitors to Hawaii tend to dress brighter, bolder and more scantily than the local norms would permit. This offends and confuses the local population. Lastly the physical signs of tourism stick out like a sore thumb in many tourist destination areas. As a result effects, such as regulations by local authorities that are not directly attributable to tourism, may be perceived by residents as

direct impacts of tourism. In cases such as these the tourist industry is held responsible for all varieties of social ills.

Social tensions within a community or society that host tourists may be heightened as a result the co-existence of tourists, seasonal workers and residents. The influx of tourists, which in many cases is a seasonal phenomenon, causes a faster pace of life, increased cost of living, crime and congestion. Competition among the groups may occur as tourism siphons off labor, space and possible loss of traditional activities that may be replaced by the exclusive practice of tourist activities. This may have negative economic impacts for the area (OCED, 1980). The impact of tourism on traditional ethnic ways, especially in the third world, may, in some cases, heighten a society's interest in its own culture and its traditional ways. On the other hand it may change the host's patterns of consumption, eating, drinking, dress, etc. or highlight the disparity between the hosts and guests standards of living and lead to frustration and ill-will towards the guests. Milman and Pizam (1988) include changes in value systems, individual behavior, family relationships, collective lifestyles and community organizations as social impacts associated with tourism. Their study also identifies the Central Florida resident's perceptions of tourism as being responsible for an improved quality of life as a result of the economic opportunities afforded by tourism. However the trade-offs include increased traffic, crime, and alcoholism. Perdue, Long and Allen (1987) in their study of tourism impacts in five communities in rural Colorado found the disruption of the local residents outdoor recreation patterns by tourists caused an antagonistic attitude towards tourists and led to

increased social definitions of community boundaries far beyond the legal boundaries. The residents also identified a higher cost of living and higher real estate prices with tourism while at the same time an improved quality of life. Allen, Long, Perdue and Kieselbach (1988) in a study that included 20 rural communities with varying populations in Colorado found residents to be satisfied with the improved medical services and recreational opportunities however they also demonstrated a strong concern for the environment. The more negative perceptions of tourism came from the communities with larger populations and the corresponding availability of services. Another finding was that as tourism development increased resident's satisfaction with opportunities for citizen involvement and public service decreased. This is explained as a result of a negative effect in the community's feeling of comraderie and the diminished influence they possess in the community as they perceive the control of the community getting out of their hands.

Tourism's other social impacts reflect changes in an area's demographic structure as a result of the creation of new jobs resulting in less out-migration and more immigration. Some of these forces are age and sex selective thereby changing the composition of the population as well as the size. Occupational changes may also result from tourism development. If the demand for skilled staff can not be filled locally outside help is used and the local population may be used for menial jobs only. Class or social structure may also be affected as workers may be drawn from other sectors of the economy. Also the influences of seasonal workers have less social

stability resulting in fewer lasting relationships and subsequently less community spirit (Lever, 1987).

Not all the impacts, resulting from tourism, on a community are negative nor do all communities perceive the same impacts as negative. There are a number of factors that enter into a community's perception of tourism that make each situation relative. These factors include; population, geographic location, heritage, length of residency, maturity of the destination area, and types of tourism and tourists. Benefits certainly accrue to the tourists. These are described as; change of environment, relaxation, recreation entertainment, social contact and broadening of horizons to name a few. There are also benefits that accrue to the community. Cooke (1982) suggests that tourism has a positive effect on community integration by providing opportunities for residents to work together on community and tourism related projects such as carnivals and fests. Also the upgrading of commercial areas provides pleasant meeting places for locals. Also through the interest of tourists in the arts (museums, theaters, etc.) support to maintain or enhance local cultural attractions is provided through entrance fees. Pearce also states that the positive social effects of increased employment opportunities as a result of tourism filter throughout the community. Allen, Long, Perdue and Kieselbach (1988) have identified residents' perceptions of positive social impacts as improved medical and community services and recreational opportunities. However the authors caution that the perception of community services and opportunities may be an "artifact of availability". As the population increases many services become more economically feasible and

residents are in a stronger position to demand improved services. The availability of these services may be the result of an increasing population and not the tourism industry. Milmam and Pizam (1988) in a study of tourism in Central Florida found residents to feel that tourism had a positive impact on enhancing the areas image as well as improving the quality of life. The authors also found residents enjoyed the social contact with tourists and felt positive about expanding the tourist industry. Yapp (1986) found tourism in Australia to have contributed to social awareness regarding the environment and the promotion of a stronger conservation ethic.

Impacts On The Environment

As mentioned above the motivation for the development and expansion of tourism is primarily economic and a result of our free market system. Benefits include job opportunities and a higher standard of living. The fact of the matter is that any activity by man will have an effect on the physical and biological environment. Tourism or for that matter any form of development will place demands on natural resources some of which may be already threatened or spoiled. The problem is that the market cannot be expected to ensure that negative environmental, or any form of, impact will not take place. The market usually has a short term view of an issue while environmental impacts are generally long-term in nature. The market does not factor in all external variables regarding environmental quality and if negative consequences are indeed known they are not always revealed. This is especially true of non-local investors who will resist paying for or mitigating

environmental damage. Also free enterprise will not guarantee that important environmental assets will be preserved despite their potential for exploitation. Therefore it is the responsibility of the public sector, at the appropriate level, to ensure that the environment is maintained in a state that corresponds with the needs of the residents as well as the tourists (OCED, 1980)

Environmental factors are, in many cases, the leading reasons why tourism development and or expansion takes place in an area. Tourists tend to be attracted to areas with complex and fragile environments such as coastal zones, small islands, alpine areas and areas of natural wonders. (Pearce, 1989; Inskip, 1987; Farrell, 1982). An example of this phenomenon is provided by Wilkenson (1987) who refers to the Caribbean citing examples of tourist facilities such as marinas that are water dependent and therefore situated in the littoral zone. These highly sensitive ecotones with their diversity of marine and terrestrial life must compete with the marinas and their associated docks, mooring fields, occasional dredging and hydrocarbon and fecal contamination. Other accommodations for tourism such as hotels and restaurants that are not water dependent also pose environmental risks as they are enhanced by their proximity to water and are frequently sited in the coastal zone. It is difficult to measure the full extent of environmental impacts and stresses as a result of tourism. However there are many known potential sources of environmental degradation brought about by tourism development and expansion.

In assessing the impacts of tourism the Organization for Economic Co-operation and Development (OECD, 1980) identifies a number of tourism related activities that stress the environment.

- Loss of natural landscape (also called environmental restructuring) as a result of expanding infrastructure, construction of dwellings and accommodations, that allow people to stay in an area for an extended period of time. This restructuring is responsible for erosion, pollution, loss of open space and beach access. In coastal zones impacts such as siltation and accretion may occur requiring dredging while in other areas dune erosion and reduced vegetation may cause coastal flooding. Eutrophication of water bodies, fresh, estuarine and saline is also a potential problem and subsequently may lead to sub-optimal public benefits.

-Destruction of flora and fauna from pollution and excessive use of natural sites due to trampling, erosion and or soil compaction. This type of impact may lead to the threatening and even the extinction of various plant and animal species.

-Environmental pollution as an impact of tourism may take many forms. Air pollution is mainly due to motor traffic. Water pollution may result from the discharge of untreated waste water due to overloaded or absent treatment plants or solid wastes and hydrocarbons from pleasure boats.

Site pollution occurs from construction sites and household wastes disposed of improperly. Also noise pollution from traffic, boats, crowds and entertainment can be perceived as environmental degradation to both residents and tourists alike.

-Aesthetic degradation of architecture and historic style resulting from the construction of more modern structures that are not always in harmony with traditional buildings can give the landscape a scattered and disorderly appearance.

-Congestion mainly from the seasonality of the tourist industry leads to time and space congestion of tourist areas. Congestion may also overload the existing infrastructure causing serious environmental damage and have a negative impact on the quality of life. This is seen in the loss of leisure time and an increase in air, water and noise pollution. The environmental damage and subsequent social tensions generated by congestion are a good example of the linkage between the associated impacts of tourism. An activity cannot exist without an impact. The word impact in itself suggests negative connotations. Tourists cannot visit any area without generating services, intensifying beach and harbor use and creating congestion and pollution problems. The trade-offs of supporting a tourism industry cover the whole spectrum from good to bad and usually cannot be identified as black or white but lie in between. Ideally tourism would involve an orderly system that would accommodate the needs of visitors while respecting the uniqueness of the land, community, resident life styles and fellow visitors but such is not the case.

Tourism, on the other hand, may have positive environmental impacts associated with it. Protection and conservation of the environment can go hand in hand with tourism by promoting the need for and creation of open space and conservation areas.

Using tourism to achieve environmental conservation is promoted on the grounds that the environment, (in many destination areas tourism's main attraction), must be conserved in order to maintain a quality environment for tourism. Taking it a step further a quality environment will allow for selective marketing to attract tourists that will be more environmentally and perhaps more socially considerate, making the tourist destination area easier for everyone to live in. Environmental consideration in planning for tourism will also provide for time to monitor the impacts of tourism while allowing for residents to adjust to the social change.

The economic, social and environmental impacts listed above are essentially universal. However impacts can be exacerbated as a result of the geographic location, size, sensitivity, demographic makeup or physical or social capacity of the area. Following is a further expansion of the impacts of tourism and linkage to Block Island.

The Island System

Although insular and isolated by a sea barrier from the mainland, islands are not closed systems. They are highly open systems and subsequently vulnerable to numerous external factors and influences. These outside forces may place restraints or pressures on internal decision making methods that overcome resident's desires, traditional resource use and local planning practices and assumptions (Clark, 1985). The relative isolation of coastal islands may also carry with it political isolation. Through the island's inability to significantly influence its regional government, rules and regulations

that are inappropriate to the island environment or way of life are impressed on the island and islanders.

As a result of a destination area's distinctive tourist attracting potential, tourism and its associated impacts need to be considered within the local framework. Islands represent a somewhat unique setting for tourism and consequently a more complex relationship between the two has developed. Many islands are characterized as having a lack of natural resources, poor infrastructure, a low standard of living, an unskilled labor force and a lack of capital (Selwin, 1980; Pearce, 1990 and Wilkinson, 1987). Subsequently the micro economies place islands in a position where they can easily become dependent on tourism. Islands of all types are experiencing growth and development primarily as a result of tourism (McEachern and Towle 1972).

On the other hand the insularity of island life leads to strong local feelings about desired lifestyles, community relations and environmental conservation. Often the relationships between the environment and development assumes a greater significance on islands than on the mainland. The effects of exploitation of the island's resources are easily magnified and draw the immediate attention of the local people (Coasts, 1985).

Physically islands are surrounded by water thus creating boundaries which give islands a sense of size, in many cases smallness. Size has important consequences associated with it. An island is affected to a much greater extent by its small capacity to absorb the effects of natural disasters or epidemics (Cleland and Singh, 1980). Size also makes any fluctuation in population highly

noticeable and places economic restrictions on economic diversification.

Economically the size of an island, as with a small country, may have a significant impact. Few resources, a lack of local capital, a narrow range of local skills and diseconomies of small scale may create a specialized economy. In such a situation the need to import mainland goods and services cause a dependency on which the island has little influence with regards to the terms of trade (Selwin, 1980).

Psychologically size places emphasis on the need to maintain population and resource equilibriums. Also containment of a population within a small area enhances the cohesion of the local people, minimizes distance decay, minimizes distortion of centrally originated policies and facilitates the distribution of goods and services (Cleland and Singh, 1980). These boundaries place certain limits, or carrying capacities, on growth and development of islands ie. availability of buildable and arable land, fresh water, etc.

Ecologically islands may host numerous species of flora and fauna that are specific to particular islands. Darwin was the first naturalist to document the ecological uniqueness of islands in his efforts to explain evolution. One conclusion established was that as a species new to an island adapted, over time, to a specific and different environment it could become a new species altogether. This highly specific adaptation threatens these species with distinction if there is any modification to the environment.

Sociologically there are numerous types of islands from forest communities which are geographically distant to minority groups that are socially distant (Pitt, 1980). The physical concept of an

island with its boundaries does indeed provide for social insulation if not also for social isolation from the mainstream on the mainland. Pitt (1980) argues that the social concept of islands is a significant part of the "folk sociology" or beliefs held by islanders of the social structure and social reality. This local personality provides for an identity, albeit ethnocentric, that makes them a group with their own boundaries. Pitt goes on to draw parallels between physical and social islands describing a natural succession in the ecology of social islands. As migrants enter the island society they tend to reproduce their own society regardless of how incongruous it is. Pitt's theory is essentially Darwinian evolution as it has the more passive and socio-economically lower ranked being driven out by the more powerful and wealthy exploiters. The essence of his theory is that being small and divided islands are vulnerable to mainland interests. The fact that there is a social island existing on a physical island, Pitt feels, is important. There is the potential for productive co-operation among the islanders which will make for increased resistance to outside interferences preserving the diversity of the island, both biological and social. Herein lies the practical importance of the above.

Islands And Tourism

Island tourism is based predominantly on beaches and climate. This type of tourism precludes, for the most part, visitor attractions, anthropological, historical, archaeological, etc., in the interior areas of the islands. This phenomenon over populates and develops beach areas and may cut down drastically on the host population's visual and physical access and historic benefits such as fishing rights

(COASTS, 1985). Subsequently this does not allow tourists to gain insight into the peoples of the islands or into the many differences among the various islands that exist. Inland island attractions may also draw a different, more sensitive type of tourist resulting in less social and environmental negative impacts. The neglected interior attractions could, if properly planned, provide commercial opportunities and amenities for local people and recreational benefits for the guests.

Generally islands have limited economic possibilities; subsequently the rationale behind the development of tourism on islands is economic. Tourism is generally less sensitive to recession than other island export activities. However with regard to sustainability of island tourism two types of tourist destination areas suffer most from reductions in tourist expenditures (UNESCO-MAB, 1990). The first are marginal areas overly dependent on low-cost tours that tend to drop off significantly when a recession occurs in a metropolitan area. The second are more mature tourist destination areas that tend to cater to the middle-income mass markets. These markets are most negatively affected by economic downturns.

The UNESCO-MAB authors, writing on sustainable development and environmental management of small islands, go on to support most of the findings with regards to the positive economic benefits of tourism cited in the economic impact section above and also point out the mixed social and environmental impacts associated with tourism on islands. These include among others: inflationary real-estate pressures resulting from hotel, condominium and second home developments that may eliminate low and middle-income islanders

from owning a home and possibly forcing them off the island; the relatively small share of the tourist dollar remaining on the island; leakages as a result of imported goods, services and off-island business capital and excessive demands on island services during the peak season followed by sharp declines in employment and underutilization of services during the off-season.

This phenomenon of peak and slack seasons in a tourist destination area is well documented and affects most forms of tourism. Following is a brief overview of the impacts of seasonality on the tourism industry.

Tourism And Seasonality

Tourism in the Northeast, with regard to planning a trip, is to a large degree dictated by the distribution of holidays especially school vacations within the annual cycle (Hartmann,1986). This is not to say that all tourism destination areas are affected equally with regard to temporal patterns, different activities require different natural conditions (seasonality also has little effect on the business travelers and those who travel for personal reasons aside from pleasure). Tourist destination areas have different seasonal potentials as a result of the attractions or recreational resources available. This is particularly true of natural environments with water based resources that are dependent on the season and climate.

Another aspect of seasonality are favorable climatic conditions occurring during the summer months. This in turn has a marked effect on an area's profitability. The larger the season the greater the utilization of plant and equipment and therefore a greater return

on capital investment (Pearce, 1989). The length of the season is critical especially when there is no second season. Such is the case with coastal areas in the Northeast where both climate and access during the winter are less conducive to a second season of tourism.

In general the basic rhythm is a gradual rising to a higher level in the late spring or early summer lowering in the late summer. In the United States the primary or summer season traditionally peaks between the Fourth of July and Labor Day Weekend.

In summarizing the above there are two main seasonal factors affecting tourism; institutionalized seasonality and natural seasonality, the former following the social calendar and the latter following the geographic and climatic calendar. Therefore, on the large scale the seasonality of tourism is both culturally and regionally biased (Robinson, 1976). It should also be noted that in these annual cycles there may be several peaks or seasons within which may be found sub-cycles such as weekly cycles with alternating highs on the weekends and lows during the week.

Tourist seasonality, as a rule, creates a double problem for tourist managers in the form of seasonal employment and low productivity of capital as well as other diseconomies. The effect of seasonality is also influenced by the availability of seasonal labor and job opportunities and the degree with which these jobs are complementary or competitive (Pearce, 1990). During the peak season lack of labor or hiring labor with lower qualifications causes diminished services to the guests. Conversely during the off-season the qualified staff must be laid off. Tourists businesses want to keep their facilities at full occupancies however, this is only possible

during the peak season. Full occupation in itself is a double edged sword. As a result of the relative inflexible nature of the supply side of tourism it is difficult to modify the quantity of tourism goods on a daily basis. Therefore during the peak season, surplus demand and full capacities generate negative impacts such as over crowding, pollution, noise, etc. and in general lower standards resulting in dissatisfaction of the guests. There are also heightened stresses on the host population and environment. During the off-season capacity underutilization occurs. The tourist industry, with a high ratio of fixed to variable costs, must incur fixed costs during this period of down time (Mieczkowski, 1990). In this situation economic reality leads to low productivity, a waste of resources and ultimately to lower profits. The social and environmental reality of seasonality is increased negative impacts caused by huge influxes of visitors that stress the physical, environmental and social systems of the area. (On the positive side the off-season does enable the social and environmental recovery of the area.)

In considering the benefits of seasonality the literature mentions hardly anything at all. Indeed the highly seasonal tourism, for reasons stated above, does not produce as much profit as the more evenly spread tourism (McIntosh and Gupta, 1980). This is supported by the fact that the large corporations continually try to find ways to thwart seasonal fluctuations in the use and development year-round of attractions (Hartmann, 1986). BarOn (1975) maintains that ideally a balanced tourist season would provide, for a more enjoyable experience for a larger number of people, optimally utilize tourist facilities, provide for more and

secure employment for tourist staff and reduce prices and improve profitability.

RESPONSES TO SEASONALITY

The difficulties of increasing the supply of goods and services to the tourist industry with regard to the change in demand, limit an area's ability to respond to seasonality. The physical difficulties such as increasing the number of attractions, rooms and other services in a short period of time are clearly evident. Administrative barriers such as zoning changes, increased environmental regulations, resident attitudes etc. must also be taken into account when an area desires to expand the tourism industry. All this requires time and money and in many cases substantial risks. Therefore the ideal situation would be to spread the demand out over the longest period possible.

In responding to seasonality Mieczkowski (1990) lists several strategies. The primary response would be to change the institutional impacts associated with government regulation. This could be addressed by changing the existing pattern of school and government employees' vacations, lower taxation of the tourist industry during the off-season and through promotional/marketing programs. This would obviously be an inconvenience for many, however those that do vacation in the off-season would encounter fewer of the negative impacts associated with peak season. The secondary response would be action taken by the private sector. These would, and in many areas currently do, include a diversified pricing policy. Such policies offer reduced prices for accommodation

and transportation. Organization of events and off-season attractions (winter sports and events) and promotion of underutilized attractions are also considerations for eliminating the seasonal problems of tourism. There are tourist destination areas where neither of the above mentioned strategies are applicable. These areas as a result of their natural seasonality are not conducive to more than one season and their management and planning must indeed take into account the point where too many visitors may change the character or ruin the attractiveness of the area altogether.

An important note to the strategies for responding to seasonal tourism is that they are all economically motivated and few subscribe to the notion of taking the local pulse when advancing these ideas. There is also the possibility of creating other problems such as no opportunity for social and ecological recovery of an area and the subsequent degrading of the whole system to the point of no return.

The phenomenon, detailed above, causes cyclical stresses on destination areas. The ability of an area to absorb a population of visitors is a function of both the physical and evaluative properties of the destination area. In destination areas of limited size, such as islands, the impacts caused by seasonality will be exacerbated and at some point the area will reach its carrying capacity.

Carrying Capacity

The issue of seasonality affects most forms of tourism in one way or another and may be a major factor in planning for tourism with respect to carrying capacity and resident satisfaction.

The literature indicates that there is a level at which, the capacity of the physical environment to absorb tourists is reached and in addition to a level where the residents feel the costs associated with tourism are greater than the benefits. This threshold level, referred to as the "carrying capacity" was initially applied to natural ecosystems by scientists who formulated numerical limits for animals that could be sustained by the resources available in a given area of land. This concept has more recently been applied to man and has not only the ecological (physical) dimension but also a social (evaluative) dimension. The two may not be the same and it is important to distinguish between the two. Essentially carrying capacity identifies a correlation between the number of visitors and the negative and positive impacts as a result of them. The difficulty is in documenting and proving those changes that occur with each level of use.

The ecological dimension deals with the facilities for accommodation of tourists within a finite supply of natural resources. An example of this would be the capacity of coastal waters to absorb effluent from both land and water based sources. Other limiting factors include; fresh water, maintenance of land and water quality standards, electricity, parking, land use zones etc. This dimension is

usually expressed in terms of numbers of people with respect to time and area dimensions (Shelby and Heberlien, (1986).

As tourists engage in different types of activities they have different impacts on the destination area. Coastal tourism as a result of its diverse character is especially difficult to manage. An example of this can be seen in a sample of the activities visitors engage in on Block Island; mopeds, bicycles, boating, fishing, hiking, beach activities, sightseeing, etc.

As with many tourist destination areas access to Block Island is open by law. Therefore control of visitor numbers as a management tool is difficult if not impossible. Managing numbers can be done by dispersion (out of central areas), scheduling (ferry disembarkations), use zoning (jet-ski zones) and education of visitors as to their impacts. However it is not always the number of visitors as much as the impacts they cause.

The social dimension is generally assessed from two points of view. The first is primarily concerned with carrying capacity and user satisfaction with respect to limits of tourism development not going beyond its ability to satisfy the tourist (Allen, et. al., 1988; Jubenville and Becker, 1983; Peterson, 1983; Shelby and Heberlein, 1986).

The second is to assess the host community's perceptions of the impacts of tourism. This component deals with the capacity of the social environment of the host area to absorb visitors. Examples of host and guest conflicts are numerous and studies show that resident perception of tourism is a function of the resident tourist ratio. As the ratio of tourists to residents increases resident perceptions of

tourists tend to become negative (Allen et. al., 1988; Cooke, 1982; Inskip, 1986; Liu, Sheldon and Var, 1997; Long, 1990; Pearce, 1989 and Smith, 1989).

Shelby and Heberlein (1986) claim that in many cases much time and effort is spent collecting data about the physical environment when the problem is, for the most part, human and biological data will offer little help in resolving the problem. Cooke (1982) claims that stresses between hosts and guests are not limited to exotic settings or tourist meccas but may be expected wherever tourism develops. In her words community carrying capacity is defined as 'the point in the growth of tourism where local residents perceive, on balance, an unacceptable level of social disbenefits from tourism development'. Subsequently as the various resident tolerance levels are exceeded human behavior is altered and satisfaction is diminished. With the understanding that, due to the various types of communities and types of tourism, there are different acceptable levels for growth of tourism from area to area, Cooke (pp.26-27) proposes a set of broad guidelines that 'respect the aspirations and priorities of residents'.

1. At the local level, tourist planning should be based on overall development goals and priorities identified by residents.
2. The promotion of local attractions should be subject to resident endorsement.
3. The involvement of native people in the tourist industry in British Columbia should proceed only where they feel that the integrity of their traditions and lifestyles will be respected.

4. Opportunities should be provided to obtain broad-based community participation in tourist events and activities.
5. Attempts to mitigate general growth problems identified in a given community should precede the introduction of tourism or any increase in existing levels of tourist activity.

This type of carrying capacity determination requires social value judgements, which are not always readily accepted, to be made. The important aspect of the above is that an evaluation of the host community's acceptability to change can and should be determined. This can then be integrated into the community development plan that would ideally control and limit growth to optimize the economic benefits without inviting the social and environmental problems associated with excessive tourism development. If comprehensive tourism planning is to be achieved, all aspects of carrying capacity must be considered. There is a limit to resident tolerance for the impacts of tourism. If a community with a tourism based economy is going to sustain itself and its desired quality of life then resident input into the decision making system is a must as the political situation in a community does not always fall into line with the residents' desires. Subsequently public participation in the decision making process is the most effective way of addressing the impact of tourism on a host community.

Public Participation

As described above tourism is not without its negative impacts on the host community (see impacts). Consequently for a tourism based economy a community must become involved to maintain the desired qualities of that community. Tourism development is more than an argument pitting locals against developers as people align themselves to different coalitions depending on an issue. These various interest groups have varying priorities, methods and power bases but although there is a difference in perception there are generally overlaps that can be seen as potential trade-offs. In order to exploit these trade-offs it is important to discover them in the early stages of planning (Murphy, 1983). To understand the conflicts associated with tourism development it is necessary to place an incident within the context of planning for a particular issue (Roehl and Fesenmaier, 1987). Appropriate planning provides the link between the decision makers and the public.

Planning is fundamentally a political activity. It is a governmental process set up to formulate and execute policy on land use activities. The administration of most planning agencies is part of the executive branch of their jurisdictions and as result tied directly into the political power structure. Planning also requires the overlap of different departments and jurisdictions within government. This reality combined with private citizen participation form the basis for mediation and compromise that define politics (Koppleman, 1987).

A planning situation where managers and users work together is one where criticism is more likely to be constructive and an acceptable solution to the problem realized. General goals are needed at the outset and over time research data and public sentiment on the issue will come forth. This approach to planning is not only more equitable to all interested parties but if the policies are questioned in the formulation stage the time and money invested may save a good deal of time and money in defending or backtracking on a decision (Shelby and Heberlein, 1986).

Public participation, in the colonial home rule/town meeting format, has played a large part in local town affairs in New England for hundreds of years. As a result of the bloom of regulatory legislations of the sixties and seventies citizen participation has been an issue of increasing interest. Used as a check on the decision making powers provided to local authorities, public participation assumes that citizens would take advantage of the opportunity to participate in hearings and that they would be able to influence voting outcomes. This is especially possible in instances where the voting body is split ideologically.

Public hearing provisions are included in many acts and legislations. It has been the environmental groups that have usually fought for the inclusion of public hearings in legislations as it essentially serves those interested in "public goods" and seeks to include all interested parties in negotiations that lead to successful resolutions of planning problems. It is important to include the local government in these public hearings as they vote on the final approval or rejection of the projects.

A study of 1816 public hearings of the California Coastal Commission (Rosener, 1982) saw regulatory agencies as tending to favor the interest of those, the clients, they regulate. Rosener provides several reasons for this tendency. One reason is that it is difficult to tell those applying for a permit in a face-to-face situation that they could not build their dream house or not subdivide their land. It is also seen as difficult to ask property-owners and developers to bear the cost of resource protection. Also the provisions of many acts are vague and require discretionary authority. It was also stated by one commission member that when there is no one out there objecting many think there is nothing objectionable. It should also be noted that in a true representative mix not all decision makers are supporters of regulations that favor one party or another. This favoring is not always directly attributable to the committee members but may very well be a result of staff recommendations who speak to regulators outside the hearings. In the permit process Rosener sees public participation enabling citizens to prevent "client capture" by influencing the regulators and his study suggests that participation was effective in changing the voting behavior of the commissioners.

Studies also show that the rate of public participation in the decision making process is low. This is attributed to citizens participating only when strongly motivated to do so, such as perceiving something as having a major impact on themselves, even though the costs of participation are low, i.e., time, travel expenses, baby-sitting, xeroxing etc. and can indeed effect voting outcomes (Murphy, 1983; Petrillo, 1987; Rosner, 1982).

A study by Allen, et. al. (1988) suggests that low to moderate levels of tourism are perceived as beneficial to the community by its residents. As the population increases as a result of tourism, certain services and opportunities become more economically feasible and residents are in a position to demand certain services. Anything beyond this growth may result in greater social and economic impacts and returns on tourism investments are diminished.

The study also suggests that as tourism development increased resident satisfaction with the opportunities for citizen involvement in decision making decreased as did the importance residents' attached to citizen involvement. Studies by Liu, Sheldon and Var (1986) and Cooke (1982) support these findings but they go a step farther in identifying that the importance residents' attach to the environment increases as tourism development increases. The reasoning behind this is that tourism development at advanced levels is detrimental to the residents social consciousness. Residents feel a loss of community cohesiveness and a lack of control over and isolation from the decision making process (Allen et. al., 1988). However there is still concern about the negative consequences of tourism. This is seen in the residents perception that the environmental resource must be maintained to protect the quality of life in the community. Therefore public managers must recognize these impacts and ensure that public participation and a sense of citizen control over their community continues.

Almost any land dispute can be resolved if there is enough land to be allocated for all the various uses. This point can be illustrated by the present number of land disputes compared to those few of the past when there was a vast amount of unsettled land or at least enough land to satisfy all interested parties (Petrillo, 1987). This is no longer the case and even ownership does not assure one of control over the resources. This is often the case with government owned land where the internal decision making processes fail to enable them to properly manage the resources. As a result control over a resource is becoming as important as ownership. The more control you have the better your chances are of achieving your goals. This end can be achieved through public participation; however it must include all interested parties especially those with economic interests.

So how does this connect with tourism theory and Block Island? Block Island and the Town of New Shoreham are not unlike many coastal communities facing growth and development. There is an acknowledgement that the Town must grow and develop; however residents believe there is an appropriate path that can accommodate and balance their various desires through public participation. This acknowledgement has spawned a pool of individuals and organizations eager to tell anyone who will listen about the potentially disastrous effects of uncontrolled development on the community and its environment. By participation in various special interest groups they seek to have their ideologies incorporated into policies.

This participation is reflected in the resident survey carried out on Block Island. The respondents were asked to identify any special interest group or committee they were a member of. Of the 86 percent response to this question 76 percent belonged to one or more groups or committees. There were 39 individual groups or committees listed by the respondents. This response rate indicates a high rate of public involvement and participation in the decision making processes on Block Island.

Armed with the data from an evaluative study of issues and concerns facing residents, public participation is the most effective vehicle to allow a community to optimize the benefits and minimize the negative impacts of tourism while meeting planning objectives that will maintain a quality environment, ecological and social, for the residents.

In comparing the Block Island profile and tourism theory it is obvious by the nature of the destination area that Block Island would indeed be subject to the impacts of tourism. This study seeks to identify issues and concerns regarding the impacts of tourism on the residents of Block Island. These issues and concerns may then be used in the formulation of a community plan that encompasses the greatest amount of resident's wants and needs.

The following chapter details the hypotheses and methodology used in identifying the issues and concerns of the residents of Block Island.

CHAPTER FOUR

ANALYSIS

Introduction

The responses from the survey data were statistically analyzed, as described in the first chapter using SYSTAT, Macintosh version 3.2. The results of the tests performed on the survey data are presented in this chapter.

The research for this study is based on the hypothesis that residents in a developed tourist destination area have formulated attitudes, based on their perceptions of the impacts of tourism, and that these attitudes can be measured. Also that measuring resident attitudes will enable the formulation of a list of priorities with respect to resident perceptions of the impacts of tourism.

The results of the analyzed survey responses indicate that the residents of Block Island do indeed have quantifiable attitudes based on their perceptions of tourism and its associated impacts. This chapter details the data used to test the hypothesis. First a brief description of the background information and the groupings and categories used in the regression analysis are presented. Second the results of the factor analysis of the survey data are presented and analyzed. These are presented in two sections. The first section presents the factors as they pertain to the analysis of the three individual groups of impact statements, economic, social and environmental. In the second section the factors are presented as

they were extracted from one group composed of the three sets of statements.

Further analysis of the data includes multiple and bivariate regression analysis of the five socio-demographic background variables (independent variables) against the factor scores (dependent variables). This will help explain if any significant variation in the factor scores can be explained by the background data.

Finally the results of the responses to three statements on the local government's ability to effectively deal with tourism are discussed.

Background Information

Theory suggests that certain socio-demographic characteristics of a community may have an effect on how the community views certain issues. Theory also suggests that in the formulation of a community plan the perceptions of impacts associated with these characteristics need to be considered and incorporated in an effort to provide a plan acceptable to the widest range of residents in the community. As an example, information such as income, dependency of one's employment on tourism, etc. may have an effect on a resident's perception of the economic impacts of tourism on the community. A study of the social impacts of tourism on residents in Central Florida by Milman and Pizam (1988) analyzed the effects of socio-demographics on respondents' support of the tourism industry. They found that of 10 socio-demographic variables tested, most demographic variables did not affect respondents' level of support

for the tourism industry. Exceptions were sex, respondent's family employed in the tourism industry and respondents' employment in the tourist industry. A study by Liu and Var (1986) assessing resident attitudes toward tourism impacts in Hawaii showed the number of significant differences among socio-demographic variables to be low with only length of residency and ethnicity to warrant any further study.

In an effort to identify any effects of socio-demographic variables on the perceptions of the residents of Block Island the survey questionnaire solicited information from the respondents on the following; length of residency, Island heritage, whether a respondent rents or owns a residence, the percent one's employment is dependent on tourism and income (the responses are presented in table form in Appendix C). These variables will be regressed on the factors to identify are any significant differences in the effect of these socio-demographic variables on the factors. If a significant proportion of the factor scores can be explained by any or all of the background variables further in-depth studies into this area will be warranted. The results of the regression analysis are presented in tabular form in Appendix D. The respondents' occupation was also solicited, however it was not included in the regression analysis.

Interpretation Of Factor Constructs And Regression Analysis

ECONOMIC FACTORS

Two factors, explaining 42 percent of the variance, were extracted from the data provided by the resident's responses to the 13 statements on the economic impacts of tourism.

Economic Factor One

The first factor, labeled "positive economic benefits", explains 29 percent of the variance. This is a complex factor with eight of the statements loading greater than 0.500 (Table 5.1).

Please note that in all of the following tables "percent agree" is defined as the percentage of respondents indicating a value of 4, 5 or 6 on a 7 point, 0 - 6, scale and will be referred to as positive agreement. The mean is given to provide a measure of intensity of agreement or disagreement with the statement.

The highest three loadings, with corresponding percentages of agreement and high mean values of response, identify the positive economic aspects of tourism such as employment, stimulation of investment and increased standard of living. In descending order of factor loadings the one statement on Block Islands' economic dependency on tourism loads next with thirty nine percent of the respondents in positive agreement and a mean of 3.21.

The next two statements, in descending order of factor loadings, identify the Island's dependency on tourism and the acknowledgement that expansion of the tourist industry will have

Table 5.1 Factor Analysis of the Economic Variables.

Variable	Factor 1.	Factor 2.	% Agree	Mean
1. Tourism attracts investment and spending in the Island's economy.	.781	.224	74	4.58
2. One of the more important aspects of tourism is that it has created jobs for the residents of Block Island.	.767	.104	70	4.52
3. Residents' standard of living has increased considerably because of money tourists spend on Block Island.	.748	.231	48	3.48
4. I think Block Island is totally dependent on the tourist industry.	.696	-.019	39	3.21
5. I think that commercial activities could be expanded if carried out under strict guidelines.	.611	-.232	43	3.36
6. Expanding the tourist season would be economically beneficial for the Island.	.572	.273	49	3.43
7. The economic contribution of tourism outweighs the negative social impacts of tourism .	.529	.218	31	3.01
8. Revenues from tourism are generally recirculated within the Island's economy.	.522	.442	22	2.56
9. Increasing the number of tourists will improve the Island's economy	.356	.594	32	2.56
10. Prices of many goods and services have increased because of increases in tourism.	.253	-.662	68	4.35
11. Economically local businesses are the ones that benefit the most from tourism.	.127	.238	61	4.06
12. Non residents should be encouraged to develop tourism related attractions or businesses.	.050	.618	13	1.54
13. Tourism development unfairly raises real estate values.	-.057	-.375	47	3.48

positive economic benefits. The statements have both response means and percent of positive agreement suggesting support for the commercial aspects of expansion.

The remaining two of the loadings greater than 0.500 identify with the negative economic impacts of tourism. The loadings are relatively high; however, the low percent of positive agreement is also reflected in the intensity of agreement, the mean, further demonstrating acknowledgement of the economic benefits and the Islands' dependency on tourism. Yet Islanders recognize that the economic contribution does not come without a price. In this instance economic leakage and negative social impacts are seen as part of the package.

In an effort to identify the forces within the sample of respondents that would explain any variation in the above factor (positive economic benefits) the socio-demographic data was regressed on the factor scores. Bivariate regression found the tourism related employment variable to be statistically significant in accounting for a portion of the variance in the dependent variable (Appendix D, Table 1).

As indicated by the frequency distribution of responses to the background question the mean of all the respondent's work is over 50 percent dependent on tourism. It is not surprising that of all the variables this one would explain a proportion, however small, of variance in the factor labeled "positive economic impact".

This leaves 92 percent of the variance unexplained or accounted for by other factors. This statistical measure merely indicates how

closely the variance in the factor is associated with the variance in the percent the respondents' work is related to the tourism industry and does not mean dependency on tourism for income caused the differences in response.

In summary the first factor identifies resident's acknowledgement of the economic benefits of tourism and the fact that the Island is indeed economically dependent on tourism. Although residents believe expansion of the tourist industry would improve the Island's economy they realize it would not come without a price and therefore control of growth should be kept in the hands of the residents.

Economic Factor Two

The second factor, explaining 14 percent of the variance, is labeled "negative resident attitudes towards off Island entrepreneurs". This factor contains only two loadings over 0.500 and the third highest loading, 0.442, the only other statement demonstrating any significant positive effect on the factor.

The highest loading, the statement encouraging non-residents to develop tourist related attractions or businesses, has the lowest percent of agreement, 13, and lowest mean response of the entire set of economic statements, 1.54. The second highest loading, increasing the number of tourists will improve the Island's economy, also had a low percentage of positive agreement and a mean indicating disagreement with the statement.

These loadings suggest that the residents of Block Island believe any expansion of the local tourism industry should be done only by

Island interests. However they also suggest that increasing the number of tourists will not necessarily be beneficial to the Island's economy. The linkage between these two statements indicates that non-residents influence the numbers of tourists that come to the Island and therefore the degree of impact to the Island.

The third statement suggests that if expansion takes place revenues will not necessarily stay or recirculate within the Island's economy. This statement further supports the highest loading that non-residents should not be encouraged to develop tourist related attractions or businesses.

The extremely low negative loading on statement ten links residents' perception of tourism's negative economic impacts with their belief that more tourists do not necessarily mean greater economic benefits for the Island's residents.

Factor scores for the above factor were tested by multiple and bivariate regression analysis for predictor variables using the socio-demographic background data (Appendix D, Table 2). Multiple regression of the five background variables resulted in no significant findings. Bivariate regression analysis of the individual background variables on the factor scores also indicated no statistically significant effect on the factor construction.

In summary the second factor suggests that Block Islanders perceive that tourism expansion should not be encouraged especially by off Island interests because of economic leakage. This is shown by the first and third highest loadings. The factor also indicates that the residents perceive that increasing the number of tourists will not necessarily improve the economy.

SOCIAL FACTORS

Two factors regarding the impact of tourism on the Island's social structure were extracted from the survey responses to the 12 questions on the social impacts of tourism. These factors explained 44 percent of the total variance in the responses.

SOCIAL FACTOR ONE

The first factor, explaining 25 percent of the total variance, is labeled "social disruption" (Table 5.2). There are six statements with loadings greater than 0.500. The first four highest loading statements identify with the diminished quality of life as a result of tourism. The first three statements link the negative social impacts to the season. All of these have correspondingly high percents of positive agreement and mean values of response suggesting overall agreement. The fourth statement in the hierarchy of loadings identifies tourism as having a negative impact on the Island's quality of life; however there is much less positive agreement with the statement (25 percent) and the mean response value (2.73) indicates overall disagreement. This implies that the quality of life is diminished during the peak season when the Island's social carrying capacity is approaching its maximum and not on a year-round basis.

The last two loadings over 0.500 suggest a general strong agreement with the belief that the negative impacts of tourism on the Island's social structure are as a result of tourists being unaware or uncaring of the Islanders' lifestyle. Subsequently residents'

TABLE 5.2 FACTOR ANALYSIS OF THE SOCIAL STATEMENTS.

Statement	Factor 1.	Factor 2.	% Agree	Mean
1. The large number of tourists are responsible for increased crime, noise ,congestion, stress etc.	.745	-.037	72	4.43
2. The Island's capacity to absorb tourists during the peak season has already been reached.	.695	-.045	67	4.26
3. Tourism disrupts the Island's social relationships during the season.	.695	-.174	54	3.63
4. Tourism has a negative impact on the Island's quality of life.	.646	-.238	25	2.73
5. I feel that tourists are unaware/uncaring of our Island's lifestyle.	.605	.051	50	3.66
6. Tourists are inconsiderate.	.595	.276	38	3.23
7. Tourists are a burden on the Island's services.	.452	-.040	68	4.11
8. Tourism has had a positive impact on the availability of services such as health, police protection, transportation etc. for the Island's residents.	.175	.665	44	3.27
9. Because of tourism there are more recreational opportunities (hiking,public access to water etc.) for Block Island's residents.	.020	.705	43	3.25
10. Tourism has a positive impact on encouraging cultural activities (arts, crafts, music etc.) on Block Island.	-.042	.723	51	3.52
11.Island residents are friendly and courteous to tourists.	-.103	.449	31	2.99
12. I think that tourism contributes to the maintenance of the Island's historic and cultural attractions.	-.204	.665	44	3.35

perceive tourists as being inconsiderate. The first statement has both a high percent of positive agreement and corresponding mean demonstrating overall agreement with the statement. The latter statement has a mean corresponding with slight agreement but shows a lower percent of positive agreement. I believe the question was poorly worded as several respondents wrote comments saying the statement was too general and could not be answered in such a manner, thus the lower percent of positive agreement.

The seventh highest loading statement in the hierarchy also fits the factor label. Although it has a loading of less than .500, .452, the gap between it and the next highest loading, .175, warrant its inclusion in the factor interpretation. The statement's high percent of positive agreement and mean value suggests residents perceive tourists as a burden on the Island's services.

Multiple regression analysis of the five socio-demographic background variables on the factor scores indicate that the five variables explain 21 percent of the variance (Appendix D, Table 3).

Bivariate regression of the individual background variables show only the income variable to have a significant effect on the factor (Appendix D, Table 3).

In summary this factor, explaining 25 percent of the variance, identifies a disrupted social structure during the peak season. Residents' perception of the source of the disruption are the insensitive attitudes of the tourists towards the physical and cultural aspects of the Island and its lifestyle.

Multiple regression shows the five background variables to have a statistically significant effect in explaining the factor. Bivariate

regression of the individual background variables shows only income to have a statistically significant effect on the factor (Appendix D, Table 3).

Social Factor Two

The second factor labeled "positive socio-cultural impacts" clearly identifies the benefits the community enjoys as a result of the tourist industry. This factor explains 19 percent of the variance and identified four statements with values greater than 0.500 (Table 5.2).

The four statements in descending order of loading identify tourism's positive impact on; the encouragement of cultural activities, increased recreational opportunities, increased availability of services and the contribution to the maintenance of cultural and historical sites. All of these statements have positive agreement of greater than 40 percent and mean response values greater than 3.27.

Multiple and bivariate regression of the socio-demographic variables resulted in finding no statistically significant relationships with the factor (Appendix D, Table 4).

In summary the second factor identifies the positive social impacts resulting from the fact that Block Island is indeed a tourist destination area. These benefits are enjoyed by the residents throughout the year and improve the overall quality of life. The negative loadings indicate that the increased opportunities are appreciated however they are a trade off with the negative impacts experienced during the peak season.

Environmental Factors

Three factors, explaining 48 percent of the variation in the group of statements on environmental impacts were extracted.

ENVIRONMENTAL FACTOR ONE

The first factor, labeled "environmental concern", explains 17 percent of the variance (Table 5.3). This factor has three loadings greater than 0.500.

The two highest loadings compare residents' perception of the importance of economic gain with that of environmental protection. Respondents demonstrated extremely little positive agreement and correspondingly low mean values of intensity of agreement with the statements suggesting economic gains from tourism are of greater importance than environmental protection and maintenance. The third loading, showing residents' disagreement with the statement that the existing controls and regulations can effectively control growth on the Island, suggests concern that the impacts from the economic gains of tourism are not effectively controlled.

TABLE 5.3 FACTOR ANALYSIS OF THE ENVIRONMENTAL VARIABLES.

Variable	Factor 1.	Factor 2.	Factor 3.	% Agree	Mean
1. The economic gains from tourism are more important than protection of the Island's environment.	.818	-.049	.134	10	1.29
2. The positive impact of boaters outweighs their negative environmental impact to the salt pond.	.734	-.088	.117	22	2.38
3. Existing controls and regulations can effectively control growth on the Island.	.628	.117	.085	31	2.50
4. Tourism has not contributed to a decline in the ecological environment any more than residential expansion.	.204	-.011	.658	31	2.76
5. Limits to the numbers of visitors to the Island should be set.	.172	.480	-.422	33	2.70
6. Because of tourism our roads and other public facilities are kept in better shape.	.150	.400	.432	33	3.00
7. Tourists have an appreciation for the Island's sensitive ecology.	.126	-.132	.552	14	2.13
8. The control of Block Island's growth is out of the hands of the residents.	.068	.630	.336	43	3.16

Table 5.3 Continued

Variable	Factor 1.	Factor 2.	Factor 3.	% Agree	Mean
9. Compared to the present there should be a reduction in the number of vehicles allowed to arrive on the Island.	-.137	.630	.336	43	3.16
10. Tourism has resulted in overcrowded beaches, hiking trails and other outdoor places for the local population.	-.156	.593	-.025	49	3.27
11. A lower standard of living is worth the cost of a protected environment.	-.273	.539	-.269	38	3.21
12. Tourist are attracted to Block Island by its natural beauty.	-.512	-.132	.547	80	4.90

Multiple and bivariate regression analysis of the background variables resulted in finding no statistically significant relationships with the factor (Appendix D, Table 5).

In summary most all residents place a high degree of concern on protection of the environment as opposed to economic benefits and believe that the existing controls and regulations are not adequate for the amount of protection desired by the residents.

An interesting contrast in the positive and negative loadings is observed. Ninety percent of the respondents believe that, with an extremely high mean value, protection of the environment is of greater importance than the economic gains associated with tourism. On the other hand 38 percent, with a mild level of intensity of agreement (mean = 3.21), believe that a lower standard of living is worth the cost of a protected environment.

The environment is important; to residents, they acknowledge that tourism provides positive economic and social impacts that are essential to the Island and their livelihoods. The Island's natural beauty is what stimulates tourism and therefore essential to maintain. Subsequently, increased control over the tourist industry on the Island may be the most sensible and equitable way to maintain both the desired quality of life and a livelihood for resident Islanders.

ENVIRONMENTAL FACTOR TWO

The second factor extracted concerns is labeled "control of tourist numbers". This factor has four statements loading greater than 0.500 and explains 17 percent of the total variance (Table 5.3).

This factor's positive loadings greater than 0.500 include regulation of vehicle numbers, resident's loss of control over the Island's growth, overcrowding of outdoor spaces and a lower standard of living being worth the cost of a protected environment.

The highest loading, regarding vehicle reduction, has both a high percentage of positive agreement and a high degree of intensity of mean response. The other three loadings have relatively high percentages of positive agreement but with only mild degrees of intensity. Overall the theme is that of growth control with vehicle reduction representing a positive step in containing the number of tourists and their impact on the Island.

Multiple regression of the five socio-demographic background variables explains 23 percent of the variance in environmental factor two. Bivariate regression of the individual background variables showed two variables to have a statistically significant effect on the factor. The data on Island heritage and the data on the relationship between one's work and dependency on tourism were statistically significant in explaining a proportion of the variance in the factor scores (Appendix D, Table 6).

In summary this factor clusters resident's concerns for adequate controls on tourist numbers that are perceived as being out of the hands of the residents. This factor also identifies residents favoring a reduction in standard of living as a means for controlling this growth.

Regression analysis of the background data identifies heritage and income dependency on tourism explaining a statistically significant proportion of the variance.

Controlling numbers of visitors and vehicles to the Island is difficult because the Island has no control over the source, the ferrys, therefore it is to a great extent out of their hands.

ENVIRONMENTAL FACTOR THREE

The third factor, "tourist's lack of appreciation for island's ecology", accounts for 14 percent of the variance (Table 5.3).

The highest loading statement has a 31 percent positive agreement that tourists have not contributed more to environmental decline on the Island than residential expansion but has a mean of mild disagreement with the statement (mean value = 2.76). The other two loadings over 0.500 show respondents to have only 14 percent positive agreement (mean value = 2.13) with the perception that tourists appreciate the Island's sensitive ecology and an 80 percent positive agreement (mean value = 4.90) that tourists are attracted to the Island by its natural beauty.

The three loadings greater than 0.500 for this factor identify resident's perception that the percentage of environmental decline

attributable to tourism is a function of the tourist's lack of understanding or uncaring attitude towards the Island's fragile environment.

Multiple regression of the five background variables resulted in finding no statistically significant relationships with the factor. Bivariate regression of the individual background variables identifies one variable, income, as having a statistically significant effect on the factor, (Appendix D, Table 7).

In summary this factor clusters statements regarding the impact of tourism on the decline of the Island's ecological environment. Tourists are not perceived as sensitive to the Island's ecology, but it is the Island's natural beauty that attracts them. Nor are they perceived to be that much more detrimental to the ecological environment than residential expansion. Perhaps new residents are perceived as equally detrimental, or as the number of lots ecologically suitable for development diminishes, residents see lawyers finding loopholes to circumvent existing regulations. Limiting the number of tourists is not perceived as the answer to stem negative environmental impacts as that would also have negative economic impacts. It appears that an ecologically sensitive tourist combined with limits on the negative environmental influences (such as vehicle numbers) which at the same time, would not limit the positive economic impact of tourism, is the desired formula.

Factor Analysis Of The System As A Whole

Assessing the impacts of tourism on the residents of Block Island using factor analysis in a holistic approach is also appropriate. This approach enables the impacts of the system as a whole to be evaluated as opposed to evaluating subsets which in reality can not be readily separated. This method factor analyzes the variables from the three sub sets, economic, social and environmental, together. The hierarchy of factor extraction then enables the ranking of resident attitudes regarding the system as a whole. The number of factors to be extracted, in this case four, was determined using the Scree-test (Cattell,1959). The total amount of variation explained by the four factors is 43 percent.

HOLISTIC FACTOR ONE

The first factor in the hierarchy of four is labeled "opportunities resulting from tourism" and contains 11 percent of the total variance explained (Table 5.4). This factor contains six loadings with values greater than 0.500. The first four variables in the hierarchy identify opportunities associated with the positive impacts of tourism such as; encouragement of cultural activities, increased availability of services and recreational opportunities as well as an increased standard of living.

TABLE 5.4 FACTOR ANALYSIS OF THE COMBINED VARIABLES.

Variables	Factor 1.	Factor 2.	Factor 3.	Factor 4.	% Agree	Mean
1. Tourism has a positive impact on encouraging cultural activities (arts, crafts, music etc) on Block Island.	.721	.003	-.157	.181	51	3.52
2. Tourism has had a positive impact on the availability of services, health, police protection, transportation etc. for the Island's residents.	.617	.008	.363	.070	44	3.27
3. Residents' standard of living has increased considerable because of money tourists spend on Block Island.	.590	-.103	-.030	.547	48	3.47
4. Because of tourism there are more recreational opportunities (hiking trails, public access to water etc.) for Block Island residents.	.572	.015	.105	.375	43	3.27
5. The positive economic impact of Boaters outweighs their negative environmental impact to the Salt Pond.	.551	-.259	-.113	-.031	22	2.38
6. The economic gains from tourism are more important than protection of the Island's environment.	.523	-.425	-.053	-.260	10	1.28
7. The Island's capacity to absorb tourists during the peak season has already been reached.	.086	.690	.168	-.153	67	4.26

Table 5.4 Continued

Variables	Factor 1.	Factor 2.	Factor 3.	Factor 4.	% Agree	Mean
8. The large number of tourists are responsible for increased crime, noise, congestion, stress etc.	.136	.672	.168	-.284	72	4.43
9. Compared to the present there should be a reduction in the number of tourist vehicles allowed to arrive on the Island.	-.066	.644	.072	-.002	66	3.14
10. Tourism has a negative impact on the Island's quality of life.	-.212	.637	.228	-.116	25	2.72
11. A lower standard of living is worth the cost of a protected environment.	-.152	.595	.094	.199	38	3.21
12. Tourists are a burden on Island services.	.054	.569	-.229	-.107	68	4.11
13. Tourism disrupts the Island's social relationships during the season.	-.058	.568	.284	.097	54	3.63
14. Limits to the numbers of visitors to the Island should be set.	.212	.547	.284	-.365	33	2.69
15. Existing controls and regulations can effectively control growth on the Island.	.144	-.540	.260	-.072	31	2.49
16. I feel that tourists are unaware/uncaring of our Island's lifestyle.	-.019	.245	.740	.016	50	3.65

Table 5.4 Continued

Variables	Factor 1.	Factor 2.	Factor 3.	Factor 4.	% Agree	Mean
17. Tourism development unfairly raises the real estate values.	-.304	.047	.654	.040	41	3.39
18. The control of Block Island's growth is out of the hands of the residents.	.137	.101	.592	-.072	43	3.15
19. One of the more important aspects of tourism is that it has created jobs for the residents of Block Island.	.217	.171	.008	.767	70	4.52
20. I think that commercial activities (charter fishing, art gallery, boutique etc.) could be expanded if carried out under strict guidelines.	.019	.032	-.001	.647	43	3.36
21. Tourism attracts investment and spending in the Island's economy.	.458	.009	-.065	.642	74	4.57
22. Expanding the tourist season would be economically beneficial for the Island.	.196	-.235	-.013	.565	49	3.43
23. Tourists have an appreciation for the Island's sensitive ecology.	-.039	-.289	-.087	.542	14	2.13
24. The economic contribution of tourism outweighs the negative social impacts of tourism, such as congestion of public areas, noise etc.	.258	-.265	.094	.490	31	3.01
25. I think that Block Island is totally dependent on the tourism industry.	.323	-.037	.387	.472	39	3.20

Table 5.4 Continued

	Variables	Factor 1.	Factor 2.	Factor 3.	Factor 4.	% Agree	Mean
	26. I think that tourism contributes to the maintenance of the Island's historic and cultural attractions.	.493	.010	-.103	.471	44	3.35
	27. Tourists are attracted to Block Island by its natural beauty.	.021	.038	-.006	.409	80	4.89
I I I	28. Tourism has not contributed to a decline in the ecological environment of Block Island any more than residential expansion.	.278	.199	.248	.318	31	2.76
	29. Tourists are inconsiderate.	.353	.275	.473	-.291	38	3.23
	30. Revenues from tourism are generally recirculated within the Island's economy.	.481	-.150	.006	.290	22	2.55
	31. Increasing the number of tourists will improve the Island's economy.	.325	-.453	.448	.195	32	2.54
	32. Island residents are friendly and courteous to tourists.	.204	.052	-.226	.159	31	2.98
	33. Because of tourism our roads and other public facilities are kept in better shape.	.452	.044	-.014	.144	33	3.00
	34. Economically local business interests are the ones that benefit most from tourism.	-.147	-.084	.323	.124	61	4.05

Table 5.4 Continued

Variables	Factor 1.	Factor 2.	Factor 3.	Factor 4.	% Agree	Mean
35. Tourism has resulted in overcrowded beaches, hiking trails, and other outdoor places for the local population.	-.228	.375	.411	-.100	49	3.27
36. Non-residents should be encouraged to develop tourism related attractions or businesses.	.218	-.456	.260	-.058	13	1.53
37. Prices of many goods and services have increased because of increases in tourism.	.038	.466	.208	.051	68	4.34

These variables all demonstrate correspondingly high percentages of positive agreement and mean values of intensity of agreement. The other two loadings in this factor identify the strong resident feelings that enhanced economic gains and other opportunities resulting from tourism do not outweigh protection of the environment or the negative impacts associated with tourism. These statements represent some of the strongest resident sentiment as evidenced by the low percent of positive agreement and low mean intensity values associated with the statements.

Multiple regression analysis of the five socio-demographic background variables and bivariate regression analysis of the individual background variables uncovered no statistically significant relationships with the factor (Appendix D, Table 8)

In summary the residents acknowledge the opportunities associated with the tourism industry. The acknowledgement is qualified by the inclusion of the fifth and sixth loadings identifying resident's concern that the opportunities provided by tourism are not without impact on the environment. This linking of opportunities and concern for the environment imply that these benefits should not come at the expense of the environment.

HOLISTIC FACTOR TWO

The second, "social disruptions and carrying capacity", has eight variables loading greater than 0.500 and explains 13 percent of the variance (Table 5.4).

A relatively complex factor it identifies negative impacts resulting from peak season tourism. The highest loading statement, regarding

the Island's carrying capacity as being reached during peak season, sums up resident attitudes in this factor. Of the eight statements loading greater than 0.500 six (7, 8, 9, 11, 12, 13) directly address seasonal carrying capacity and social disruptions. These six statements also have high percents of positive agreement and mean values of intensity. The other two statements show residents to slightly disagree that tourism has a negative impact on the quality of life and slightly disagree that limits to the numbers of visitors to the Island should be set. Although seemingly contrary to the factor label on a year-round basis, the quality of life is not really diminished nor is there a need to limit the number of tourists. These are peak season social and carrying capacity issues only.

Multiple and simple regression analysis of the socio-demographic background variables resulted in finding no statistically significant relationships with the factor (Appendix D, Table 9).

In summary the second factor in the analysis of the system as a whole identifies resident's concerns of seasonal social disruptions and strain on the physical and social carrying capacity of the Island.

HOLISTIC FACTOR THREE

The third factor extracted under the holistic assessment of the impacts of tourism, labeled "lifestyle threats", explains 8 percent of the variance (Table 5.4).

This factor contains a variable from each of the three subsets and identifies the Island's lifestyle and changes that are of concern to the residents. The three loadings greater than 0.500; tourists are unaware and uncaring of the Island's lifestyle, tourism unfairly raises real estate values and control of the Island's growth is out of the hands of the residents all have corresponding high percentages of positive agreement and high mean values of intensity.

Multiple and bivariate regression analysis of the five socio-demographic background variables uncovered no statistically significant relationships with the factor (Appendix D, Table 10).

In summary the third factor in the hierarchy of the analysis of the system as a whole identifies threats to the residents' desired lifestyle as a result of tourists' attitudes, tourism induced growth and subsequent loss of control over the Island's growth.

HOLISTIC FACTOR FOUR

The fourth factor, labeled "positive economic aspects" has six statements loading greater than 0.500 and explains 11 percent of the variance (Table 5.4).

The highest five loadings in the hierarchy identify positive economic aspects of tourism with the acknowledgement that expansion of the industry would have positive economic benefits and

the residents' standard of living has improved as a result of tourism. These statements also have corresponding high percentages of positive agreement and high mean values of intensity. The one odd loading concerns the strong perception that tourists do not have an appreciation for the Island's sensitive ecology. This linkage supports the notion that residents feel towards strongly towards the environment.

Multiple regression of the five socio-demographic variables in the background data explained a statistically significant 24 percent of the variance (Appendix D, Table 11). Bivariate regression of the individual background variables identified income to have a statistically significant effect on the construction of the factor (Appendix 4, Table 11).

In summary the fourth factor extracted from the system as a whole identifies the positive economic aspects of tourism as an issue of importance. Multiple regression analysis found the five background variables to explain a statistically significant proportion of the variance and bivariate regression analysis found the income variable to be statistically significant.

Government's Role In Tourism Planning

Three statements regarding the local government's role in tourism planning were included in the survey. These statements were included to provide a link between the residents' perceptions of the impacts of tourism and local government's actions to address these impacts (Table 5.5).

Block Island is geographically, sociologically and environmentally unique. It has a rich history and heritage and the Islands' residents feel a special need to preserve its character. As seen by the response values listed in the table the overall concerns to the three statements is quite positive. As evidenced by the number of committees and special interest groups existing on the Island the residents take the idea of public involvement in town management and planning quite seriously. It is important that they get involved in the decision making process as most all decisions will impact the majority of the residents in one way or another.

The following chapter, Discussion and Conclusions, summarizes the findings and their correlations with tourism theory and Block Island.

TABLE 5.5 GOVERNMENT'S ROLE IN TOURISM PLANNING.

Variable	Percent Agree	Mean
1. Long term planning by the local government can control the impact of tourism on the Island's ecological environment.	73	4.59
2. More government expenditures should go towards protecting the environment rather than encouraging more tourists to visit the Island.	60	4.26
3. Public hearings are a fair method of making a decision on a tourism issue.	57	3.83

CHAPTER FIVE

DISCUSSION

Introduction

Tourism in any form has impacts associated with it. Impacts may be positive or negative and affect all aspects of the physical and social character of the destination area. In considering the various types of tourist destination areas some are indeed more vulnerable than others. Natural resources, proximity to large population centers, transportation, space limitations, unique ecologies or cultures and types of attractions are some of the elements that influence the nature of tourist destination areas. Block Island's uniqueness, as described earlier makes it such a special place in the Northeast.

It is the impacts on the residents of Block Island that this study focuses on. The hypothesis put forth in this study suggest that the residents of Block Island have attitudes with respect to the impacts of tourism that can be measured to identify which areas of impact are of greatest concern. This ranking will demonstrate which and to what extent these impacts affect the residents and will suggest how residents would like to see these issues addressed in a community plan.

The analysis of the survey results is divided in three sections. The first examines residents' attitudes regarding tourism's impact on three general areas; economic, social and environmental. The second

examines residents' attitudes regarding tourism's impact on the system as a whole. The third section briefly discusses the residents' perception of the local government's role in addressing tourism related issues.

In an effort to further explain the factors extracted and to lend support to the hypothesis presented in Chapter One the following discussion relates the extracted factors to tourism theory presented in Chapter Three.

Discussion

Block Island's economy is fueled by tourism and since its break with its colonial past few alternatives for revenue generation have been successfully implemented (there is presently a committee studying potential alternatives). Subsequently the economic impact of tourism on the Island is quite important.

ECONOMIC

In the area of economic impact two factors were extracted. The first, " positive economic benefits", is quite complex and includes all statements residents perceive as positive economic benefits with loadings over 0.500. The intercorrelation of all these statements suggests that the Island's economy is significantly dependent on tourism. Also residents acknowledge the fact that tourism provides needed investment, jobs and an improved standard of living for the residents. Other research supports this view especially as it pertains to islands and areas with limited economic alternatives where tourism is used to generate needed jobs and revenue. In areas with

limited potential for revenue generation tourist facilities and support services may, through the multiplier effect, induce non-tourism related businesses to locate in the area. In the case of Block Island, with limited resources and access, opportunities for this type of economic diversification are limited. In open question number seven on the survey, respondents were asked if there were any alternatives for revenue generation on the Island (Appendix B). Fifty five percent responded yes and offered ideas such as academic retreats, aquaculture, boat building, cottage industries, educational centers, retirement centers and telecommunication related possibilities. Twenty four percent thought alternatives were a nice concept but not realistic and 20 percent gave a flat out no.

Respondents were also asked if they thought that the tourism season, with certain limits, should be expanded. Forty nine percent of the respondents indicated that they thought that the tourist season should be expanded, with limits, although some respondents also pointed out that there are limited tourism opportunities in the winter months on the Island. It is apparent that tourism fuels the Island economy; however, residents feel that it would be healthier for themselves and the economy if they were to diversify.

Bivariate regression analysis indicates the socio-demographic background variable, job dependency on tourism, as having a significant effect on the factor scores. It is common that demographic groups within a community will have differing attitudes on tourism depending on their association with and interest in the industry. This is supported by the fact that two thirds of the jobs on the Island are involved in retail and services and through the

multiplier effect, most residents benefit from indirect and induced expenditures. Further credit to this argument is presented by the fact that 54 percent of the jobs among the sample population are dependent on tourism.

The second factor extracted from the economic statements, "negative resident attitudes on off-Island entrepreneurs", is characterized by the correlation between the two statements loading over 0.500. These statements find residents against encouraging off-Island interests' involvement in the Island's tourism industry and disagreeing with the notion that a greater number of tourists will improve the Island's economy. The interpretation of this factor, which is supported by the literature, is that non-resident entrepreneurs gain economically and do not have a feeling for the quality of life desired to be maintained by the residents. Non-resident entrepreneurs, as opportunists, do not always try to develop a business that is compatible with the character of the community and do not share many of the burdens of tourism which fall on the residents. Residents recognize that the net contribution to the economy is but a portion of the expenditures. Much of the tourism generated revenues leave the Island in the form of economic leakage. This is a result of outside managers or owners sending both personal and business related money off the Island. This problem is exacerbated by these same people using outside goods and services. It is within this context, of economic leakage, that residents perceive that increasing the number of tourists will not necessarily improve the Island's economy in a manner that will offset the costs associated with the increased numbers of tourists.

This is not to say that tourist development should not take place at all. In the first economic factor extracted residents recognize tourism's importance to the community. This is supported by open question number two in the survey which indicates a large percentage of residents feel tourism could be expanded with limitations (Appendix B). Also in open question number six on the survey, 54 percent of the respondents responded that Island businesses benefit the most from tourism. Therefore Islanders can be characterized as wanting to maintain the economic benefits of tourism for those who shoulder the burdens of tourist development, Island residents.

In summary it can be interpreted that residents do acknowledge the positive economic benefits of tourism such as investments, jobs and an increased standard of living. However the Island residents also feel that if they must put up with the negative economic, social and environmental costs they should be the recipients of the economic benefits. This means keeping off-Island interests to a minimum. This will also enable them to maintain their desired quality of life and help keep off-Island economic leakage in check.

As supported by the literature bivariate regression analysis identified job dependency on tourism as having a statistically significant effect on the factor scores. This is common in an area where the local economy is dependent on tourism. The implication is that there will probably always be support for the tourist industry on Block Island as there are few other revenue generating alternatives.

SOCIAL

In the area of social impact two factors were extracted. The first, "social disruptions", emphasizes residents' concerns with the negative social impacts associated with the Island's peak tourist season. Impacts such as congestion, crime, stress etc. as a result of the large numbers of tourists, disrupt the Island's social norms and quality of life during the peak season. Residents also perceive tourists as disregarding the Islanders' lifestyle. Theory explains these attitudes as having to do with the transitory nature of tourism. This is especially true on Block Island as the majority of the tourists are daytrippers on vacation. This makes for a very short term relationship between hosts and guests, and the guests never get to know the Island as more than a place to spend a day. This results in an antagonistic relationship between the two groups. Experts suggests this may be accounted for by the difference in tourists' vacation behavior conflicting with the behavior of the Islanders who are not on vacation. Tourist behavior, aside from the vacation mentality, may be influenced by their preconceived images of the Island as a result of media advertisements that portray Block Island as a fun filled Caribbean style party place.

Further supporting the above are the responses to open question number five on the survey (Appendix B). When asked who is the worst type of tourist 42 percent of the respondents identified daytrippers. This group was linked with mopeds, drinking, litter, inconsiderate behavior and lacking appreciation for the Island's ecology, to name a few factors. Moped riders were listed next followed by inconsiderate tourists, drinkers, boaters, New Yorkers

and the wealthy. Other sources of irritation that may influence residents' perceptions of social disruptions are; physical signs of tourism such as lines, traffic congestion, seasonal workers, and the fact that Block Island as a mature tourist destination area has developed enough services over time so that it does not need tourism as bad as it once did.

Negative perceptions of tourism may also arise from a community's feeling of diminished influence and control over the community's future. However, Block Island's citizen involvement in community planning is quite high as suggested by the fact that 72 percent of the respondents are involved in a community group.

Due to seasonality, these negative impacts are exacerbated by being concentrated into a three month period on a social island, with a strong desire to maintain an equilibrium, where the least little impact is felt by all residents.

Multiple regression analysis with the socio-demographic background variables explained 21 percent of the factor's variance. This suggests more wide-spread agreement with the factor label. Bivariate regression of the individual socio-demographic background variables identified the income variable as having a statistically significant effect on the factor scores.

The literature identifies those whose jobs depend on tourism or those who benefit from tourism in other ways, such as improved community services, to generally feel that the negative social impacts associated with tourism go with the package. There are also those, especially in higher income brackets, who are marginally or not at all dependent on tourism. This group tends to have a greater negative

perception of the negative impacts associated with tourism. The implication is that this latter group will often be in opposition to tourism expansion.

The second factor extracted, "positive social benefits", identifies the positive social impacts of tourism. These include health, police and fire services as well as cultural and recreation opportunities. Theory suggest there may be two reasons for this positive perception. The residents may indeed be better off with the additional services, opportunities, etc. resulting directly from tourism or it may be a result of the services and opportunities being more economically feasible and, at the same time, residents being in a stronger position to demand them as the population increases as a result of tourism. Given Block Island's location and overall low population base it appears it is the former. This is especially true in an area affected by seasonality and few other industries to provide these services.

Another positive social impact of tourism is the enhancement of community cohesion as residents work together to plan the future of their community and try to integrate tourism, the mainstay of the economy, in a way that is acceptable to all.

In summary the social factors extracted show residents to be concerned with the social disruptions they experience during the peak season and cognizant of the positive social impacts associated with tourism.

ENVIRONMENTAL

Three factors regarding residents' perceptions of tourism's impact on the environment were extracted. The first factor, "environmental concern", clearly illustrates residents' concern for the environment and their perception that protection of the environment is of greater importance than the positive economic impacts of tourism. Regression analysis estimated no influence on the factor construction by any of the background variables.

The literature suggests several explanations for the rationale behind this finding. The insularity of Island life leads to strong local feelings about desired lifestyles, community relations and environmental conservation. In the case of islands any development assumes a greater prominence as it is readily apparent to all residents. Environmental conservation can be used as a tool to maintain a desired quality of life. Linked to issues that cannot be resolved in the residents' favour any other way, regulations promulgated under the guise of environmental conservation may achieve the desired results.

Residents are also quite knowledgeable of the island's ecology and how fragile it is as they see any modification to the Island environment as a threat to the Island's unique ecology. Finite resources are also a characteristic of islands. Residents, as opposed to developers or off-island interests, will consider the long term impacts of tourism development and see it as their responsibility to maintain the resource base.

The second factor extracted is labeled, "control of tourist numbers". This factor identifies residents' perception of the need to control tourist numbers and tourism induced growth. The high loading statements, representing the need for control, cluster with a statement concerning residents' perception that a lower standard of living is worth a protected environment. Multiple regression of the five socio-demographic background variables explains 23 percent of the variance in the factor. Bivariate regression identified Island heritage and job dependency on tourism as having statistically significant effects on factor scores.

In examining the literature for an explanation to this factor several considerations must be included. The insularity of the island system and lifestyle leads to strong local feelings about residents' desired lifestyles, community relations and environmental conservation. Psychologically, size places emphasis on the need to maintain population and resource equilibriums. Often the relationship between the environment and development assumes a greater significance on islands than on the mainland as the effects of development, readily apparent and potentially more severe, draw the attention of all the residents. This is especially apparent to the Islanders with an extensive Island heritage. This explains the bivariate regression finding that Island heritage had a statistically significant effect on the factor scores. Residents also see growth and development as requiring more services, paid for by the residents, that will go underutilized in the off-season. The effects of seasonality with its congestion, crowded recreation areas, drastic increase in vehicle numbers make residents feel as though control of

growth is out of their hands at a time when they see the Island's carrying capacity being approached. This includes both the Island's physical carrying capacity and population carrying capacity as the ratio of residents to tourists increases.

The effect of tourism related employment on this factor cannot be explained by the literature and warrants further research.

The third environmental factor is labeled "tourist's lack of appreciation for the Island's ecology". This factor identifies residents' perception that the degree of environmental decline attributable to tourism is a function of tourist's lack of understanding or uncaring attitude towards the Island's fragile environment.

Bivariate regression indicates that income has a statistically significant effect on the factor scores.

Several concepts from the literature share in the explanation of the factor. Block Island's beauty and attractions lure all types of tourists to the Island. However the primary type of tourist is the recreational tourist. With this type of tourism host and guest relationships vary widely. The relaxed and carefree attitudes, lifestyles and behavior of the recreational tourist as compared to the other tourist types, cultural, environmental, historic, etc. allows for less restrained behavior and a focus on sun, sand and sea. Viewed from a continental perspective, an island's physical remoteness and separation from the mainland make it a unique adventure. Crossing over the water adds to the feeling of leaving one's problems and norms behind. Subsequently recreational tourists from the mainland regard islands as sun and fun vacation spots and may treat the island's unique environment with disregard and ignore or miss the

essence of what an island really is, especially as felt by a resident islander.

The explanation of the effect that income had on the factor scores may be attributed to the respondents that are less dependent on tourism than the others. In many cases retirees, those who can afford second homes, and people having no link to the tourist industry moved to the Island because of its environmental qualities. Over time they have witnessed the increase of negative environmental impacts due to the growing number of tourists. Subsequently, as higher income groups have little or no dependency the tourism industry, they tend be less forgiving of tourist's lack of appreciation towards the Island's ecology.

In summary the factors extracted show residents' responses to indicate a high degree of concern with protection of the Island's ecological environment. The main issue is maintenance of the environment. To achieve this end residents see two issues that need to be addressed. The first is control of tourist numbers with regard to the physical and social carrying capacity of the Island. The second is the need to address the issue of tourist's lack of appreciation of the Island's sensitive ecology.

Discussion Of The Factor Analysis Of The System As A Whole.

The first factor in the holistic analysis of the impacts of tourism on the residents of Block Island is labeled "opportunities resulting from tourism". There are numerous benefits associated with tourism and development of the tourist industry. Tourism requires expanded infrastructure and accommodations and residents generally bear the direct and indirect costs. Although stressed during the peak season improvements in services and enhanced cultural opportunities resulting from tourism are available to residents on a year-round basis. As an island Block Island has limited alternatives for income generation and although there are substantial economic leakages an improved standard of living is also felt year-round. Tourism also has a positive effect on community integration as residents take interest in their own culture, history and heritage to work together on tourism related projects so that tourists can begin to understand the Island's residents' lifestyles. This is apparent on Block Island by the number of community groups taking an active role in determining the Island's future.

Loading with the statements identifying social and economic opportunities are two statements on environmental impacts. These statements qualify the factor label by showing that residents are very cognizant of their understanding that economic gains are part of a package and not necessarily more important than maintaining a quality environment.

The second factor in the holistic hierarchy," social disruptions and carrying capacity", identifies negative social disruptions and subsequent strains on the physical and social carrying capacity of the Island. As an island Block Island has distinctive tourist attracting potential. It is easily accessible from the major population centers in the Northeast. A unique tourist destination area that has attractions that may be enjoyed by all types of tourists. The primary type of tourist visiting the Island is recreational. This type of tourist's vacation behavior, including leisure time, discretionary income and potential misconceptions resulting from alluring advertisements, may conflict with that of the Island's residents. The physical and social isolation of the Island during the nine off-season months make it especially vulnerable to the impacts of both institutionalized and natural seasonality. Peak season surplus demand on the Island's infrastructure and full capacities cause overcrowding, pollution, noise and stresses on the entire physical and social makeup of the Island. It is at this point of unacceptable levels of social disruptions that residents feel the Island's carrying capacity is being approached. At this level they would prefer setting limits to the number of tourists with the resulting lower standard of living rather than enjoy the positive benefits associated with that level of tourism.

The third factor in the holistic assessment of the impacts of tourism on the residents of Block Island is labeled "lifestyle threats". Containing three statements loading greater than 0.500, one from each of the three main areas of impact, economic, social and environmental is included. Residents perceive tourists as being uncaring toward the Island's lifestyles, tourism as causing rises in

real estate values and control of the Island's growth to be out of the hands of the residents. Bivariate regression identified income to have a statistically significant effect of the factor scores.

In explaining this cluster of statements theory lends several useful insights. Lifestyle threats stem from several sources of impact. Although there are several types of tourists drawn to the Island the recreationist is the most popular visitor. Host and guest relations may be strained with this type of visitor as their behavior and attitudes may vary greatly from those of the hosts. Vacationists' behavior generally undergoes a change from that one would find in the vacationists' own turf. The change may just be a more relaxed and uninhibited individual on vacation but the perceptions of the visitor's behavior by the local population is that of a lack of respect for the host population and their ways. Seasonality also exacerbates the perception of lifestyle threats as all the negative impacts occur within a three month period.

Tourism's impact on real estate is also perceived as a lifestyle threat. As tourism induced inflation raises real estate values it becomes more difficult for Islanders with limited incomes to remain on the Island. This is especially difficult for young families descended from old settlers who lack the wherewithal to enter the new house market.

Island insularity, providing a personal Island identity, leads to strong local feelings about desired lifestyles. As external factors and influences exert pressures on the traditional ways residents feel threatened.

The effect of the income variable on this factor is attributable to the type of human displacement occurring in many areas of the world. If lifestyle threats are indeed a reality it will be those Islanders on the lower socio-economic scale that will be eventually displaced.

The fourth factor labeled "positive economic aspects of tourism", acknowledges the economic contribution of tourism to the Island. Residents' perceive that tourism has helped the economy, and expansion would indeed be economically beneficial for the Island. However residents also perceive that if expansion were to take place it would come at the expense of the environment as they feel that tourists do not have an appreciation of the Island's sensitive ecology. The explanation behind this factor is found in the positive economic impacts associated with tourism. The economic impact of tourism is significant and generally positive for a tourist destination area. Although usually seen in developing countries and rural areas, the economic benefits of tourism are quite important in micro economies such as islands where few resources and small scale economies are prevalent. However tourism related infrastructure does not necessarily attract non related industries that may help diversify the local economy. This is especially the case with small islands. On small islands tourist dollars go through all branches of the local economy and via the multiplier effect increase all the residents' standard of living. Although on islands the net contribution to the economy is but a portion of the total expenditures because of economic leakages, especially if there are off-island interests present on the island.

In summary the holistic analysis identifies residents' acknowledgement of the opportunities resulting from the Island's tourism industry. Importantly, however, the statements clustering the positive economic and social benefits are qualified by statements, in the same cluster, showing strong disagreement that economic gains are more important than protecting the Island's environment. Seasonal social disruptions and carrying capacity are also seen as issues as residents identify their concern with the huge influx of visitors and the unacceptable level of social disruptions occurring during the peak season. Lifestyle threats from several sources concern residents as they see certain types of tourists and negative social impacts associated with tourism having a negative effect on their desired lifestyle. Lastly residents acknowledge the positive economic aspects of tourism on the Island's economy but once again feel expansion of the industry would indeed come at the expense of the Island's ecology and their lifestyle.

Resident's Perspective On The Local Government's Role In Tourism Planning

With regard to gaining insight into how effective the residents feel their local government is in addressing their concerns the results presented in table 4.4 give a clear indication. On an island every tourism related issue affects the community in one way or another. Residents agree that to maintain their desired quality of life they must protect the resource base. They also realize the more control over the resource you have, the better the chances for achieving your goals. The Island's involvement in tourism has increased the

opportunity for citizen involvement in the decision making process. The level of public participation on the Island is indeed high. The survey found 76 percent of the respondents to be involved in one or more civic groups. As a result public of participation, any resident who desires to may gain access to the decision making process. Subsequently the residents have a feeling of confidence in their decision making process. This is not to imply all decisions will be found in favor of the residents however resident perception is that they will be heard.

Support For The Hypothesis

The focus of this research is to identify residents' perceptions and attitudes regarding tourism and its associated impacts on the community of Block Island. The overall theme behind the hypothesis is that, identification of how residents perceive major tourism related issues in the community would be useful in the formulation of a community plan. The hypothesis, as described in Chapter one, would not be rejected if evidence was found of: (1) perceptions of the impacts of tourism, (2) major issues of concern being identifiable and (3) these issues would include protection of the environment and maintenance of a desired lifestyle.

The survey results demonstrate that perceptions of impacts associated with tourism exist and that they can be quantified. Through the use of factor analysis central issues, factors, were identified among both individual areas of impact (economic, social and environmental) and within the system as a whole. Furthermore the results of the analysis did indeed identify protection of the

environment and maintenance of a desired lifestyle to be central issues of concern. Undercurrents of these central issues exist in all of the factors and surface specifically in several of the factors extracted. Despite residents' concern over protecting the environment and maintaining a quality lifestyle, they also realize that tourism provides many positive benefits and that their best strategy is to maintain control over its growth in a symbiotic relationship. This relationship, as perceived by the residents, is predicated on residents being able to gain control over several important aspects, specifically, the number of visitors and the Island's economy. With this control and continued public participation they will have sufficient leverage to control the social disruptions and negative environmental impacts resulting from tourism.

To accomplish the above the environmental triumph card may prove to be the most effective. The environment gets a lot of press. Carrying capacity issues involving social or economic themes will get less sympathy than an environmental issue, as legislators and mainlanders may find it easier to understand the rationale behind management measures that may be introduced to protect the Island's fragile environment. If indeed, as the survey results indicate, the Island's natural beauty is its main tourist appeal, Islanders may find it easier to achieve their goals by building a case around the Island's fragile environment.

CHAPTER SIX

CONCLUSIONS AND POLICY IMPLICATIONS

Coastal tourism, characterized by its marine orientation, is without a doubt one of the most significant forms of tourism today (Pearse, 1989). The world's coastlines are experiencing a population growth phenomena, and whether the growth is fast or slow, host communities are being impacted. Communities in the coastal zone with their complex, fragile and dynamic systems are especially vulnerable to tourism development; coastal and oceanic islands have an even greater appeal to tourists as an escape from the everyday, an adventure or some other unknown delight, and subsequently are even more vulnerable to tourism. At this time thousands of islands are undergoing fast paced development based for the most part on tourism (Clark, 1985). The more obvious by-products of this development phenomenon are deterioration of the environment accompanied by a decline in the quality of life for the residents.

As communities experience tourism development, frequently at the expense of the resident population, there is a need to integrate

residents' attitudes and perceptions regarding this development with the community's development plans.

In order to control tourism development and mitigate the undesirable impacts planners need to know not only basic information such as the number of arrivals, the subsequent impacts and the reason why visitors come to tourist destination areas but also how the residents feel about tourism and its effect on their lives. Planning for any community requires a knowledge about how the residents feel about the direction their community should take in the future and research expands this knowledge.

This study examined the impacts of tourism on the residents of Block Island. It was hypothesized that environmental protection and maintenance of a desired lifestyle would be central issues of concern to the residents. While this was proved to be true by the analysis, several other important concerns also emerged.

The impacts of tourism on the residents of Block Island can for the most part be categorized as either positive or negative. With respect to the economic impacts the residents realistically acknowledged the positive benefit the tourism industry has on the Island such as increased jobs, investment and an improved standard of living etc. Residents feel that commercial activities could be expanded if carried out under strict guide-lines. Residents also expressed belief that expanding the tourist season would be economically beneficial for the Island. However the residents also acknowledged the importance of maintaining economic control of the Island by searching for alternatives to diversify the Island economy while discouraging off-island interests from becoming involved in the tourist industry.

If they do not, residents will bear the brunt of the costs, provision of services and social disruptions etc., while off-island interests will reap the economic benefits. Other perceived negative economic impacts attributed to tourism include increased prices in real estate and other goods and services.

Social disruptions characterized by the negative impacts of a seasonal tourist destination area (that primarily attracts recreational tourists) are a major concern of the residents. The quality of life enjoyed by the residents for nine months is seriously disrupted during the peak season. Vehicle and people numbers, congestion, noise, inconsiderate tourist behavior, etc. characterize the negative social impacts. It is these seasonal impacts combined with increasing costs of real estate and goods and services that give the residents a perception that control of Block Island's growth is out of their hands. Conversely, residents clearly acknowledge the social benefits they enjoy as a result of tourism. These include: increased availability of services such as health and police, etc. and enhanced recreational and cultural opportunities.

The environmental impact of tourism is always on the minds of the residents. They are concerned with the maintenance of the Island's fragile environment and see the economic gains from tourism not worth the cost of a deteriorated environment. This perception seems to conflict with the first factor, "positive economic benefits", extracted from the economic variables and fourth factor extracted from the holistic variables, "positive economic aspects". However in the long term, if residents keep control over the Island's growth they should also be able to direct the growth of the tourist

industry. One step in achieving this goal, although with no apparent solutions, surfaces in environmental factor two, "control of tourist numbers". Part of this problem is perceived as a physical carrying capacity issue, too many tourists. Another part is seen, as the third factor extracted from the environmental variables, as the tourists' lack of appreciation for the Island's fragile environment. There are no readily identifiable positive environmental impacts associated with tourism except in some areas where eco-tourism has been promoted in an effort to attract environmentally sensitive tourists during the off-season.

The findings from the holistic approach parallel those findings mentioned above. It identifies a range of opportunities provided by tourism such as increased standard of living, cultural and recreational activities and availability of services such as health and transportation, etc. It also identifies residents' perceptions of the negative impacts associated with tourism such as social disruptions, a maximizing carrying capacity and both social and economic lifestyle threats.

The methodology needed to fully evaluate the was incomplete. Factor analysis, the technique used to identify the residents major concerns, did not allow for prioritizing the responses. Although there are other methods the simplest would be to return to the Island and face to face interview an appropriate number of residents and have them rank their priorities. The literature suggests that residents in different tourist destination areas will rank the impacts of tourism differently. For example, residents in an underdeveloped area will rank the positive economic benefits of tourism greater than the

negative social and environmental impacts. Whereas in an economically better off or a more mature tourist destination area residents will rank protection of the environment greater than the economic benefits. In having knowledge of which impact is given greater priority planners would be able to gauge more accurately if the community plan did indeed reflect the residents' desires.

The inclusion of the regression analysis in this study was to identify if the socio-demographic background variables in the survey could indeed be predictors of the factor scores. The regression analysis results indicates that there are indeed some statistically significant relationships between the factors extracted and the background data. Just as importantly, however, there are instances where there were no relationships between the factor scores and background variables.

The literature suggests that the impacts of tourism, although similar in nature, differ in intensity and focus by location and area. This is due to the type of tourist, their behavior, the cultural and economic differences between the hosts and guests and the rate and scope of the industry's growth in that area. Residents' perceptions of those impacts are not necessarily objective but affected by one or many factors working together, (income, job type, eg.). Theory suggests that certain socio-demographic characteristics of a population can be used in the analysis of community perceptions to identify any significant relationships between a particular sub group of that population and an issue regarding the impact of tourism development. An example of the above is seen in the results of the regression analysis of the socio-demographic background information

on the factor scores for environmental factor two, "control of tourist numbers". The multiple regression analysis is significant. This indicates that the five variables acting together have an effect on the factor scores. The bivariate regression analysis estimates Island heritage and tourism related employment to be predictors of the factor scores.

The results of this study indicate that a model to identify which groups or sub groups within a population favor or oppose certain tourism related issues, and subsequent impacts, can be designed. The ability to predict how certain socio-demographic groups will perceive a particular issue could be an important asset to planners. In the early stages of policy formulation opposition groups could be identified and included in the decision making process. This would have a major impact on potential costs and or time delays involved in the plan's implementation. Subsequently further studies of this nature carried out on Block Island should be designed to incorporate an analysis to test for significant differences among socio-demographic groups. However a greater number of variables than identified in this study should be included. For example, sex, age and education.

Several policy implications and recommendations can be drawn from this study. In identifying areas of concern residents acknowledge the benefits and opportunities associated with tourism. In addressing these concerns residents feel they need to maintain economic and social control of the Island. When in control the residents will be able to keep visitor numbers and the subsequent

social and environmental disruptions that threaten their lifestyle to an acceptable level.

In addressing the areas of concern identified by the residents there are three general directions that can be taken. The first is the direct or regulatory approach. This approach leaves little freedom of choice and may not be readily feasible as the implementation of some of the tactics will get bogged down in public hearings and litigation. Direct approach tactics include: fines, limiting access to designated points only, rotation of the use of access points and attractions, periodic closing of certain roads etc., limiting visitor and tourist numbers via access points, increased surveillance, minimum or maximum length of stay, restrictions on fishing, hunting recreation, jet skis, etc. and required reservations.

The second direction is the indirect approach. This is not as effective as the direct approach as some people will always ignore local efforts to influence their behavior. This approach includes; advertising specific attributes of an area, improve (or not) access roads, trails, beaches, wildlife populations etc., identification of the range of recreation opportunities in other areas of the region to spread out tourists, educate users on the environmental fragility of the area and charge a constant user fee or differential fee during the peak season.

The third approach is using a combination of the first two. The theme is to try the indirect approach first, monitor its effectiveness, and if all fails use some of the direct tactics. The problem here is the third approach relies on continual monitoring of the effectiveness of the planning strategies employed and more studies to keep up with

any changes. Studies, of any academic nature including tourism impact, are often viewed sceptically by residents and planners as academic exercises outside the sphere of reality or application. Managers want variables that are manageable not merely a set of technical, theoretical or conceptual constructs. However there is a utility in carrying out and continuing studies that add to the body of knowledge regarding tourism planning. It is within this body that, as facts are brought together, the theoretical foundation necessary for any information to be useful is found (Manning, 1986).

The results of this study suggest that further studies would be helpful in planning for the Island's future. For instance, monitoring the effectiveness of the indirect approach by surveying visitors to find; if environmental education posters or appeals by the town for tourists to reduce their negative behavior, as published in the Block Island Times, had an effect on their behavior, or did visitors, once informed, go to lesser used areas, etc. This is especially important when; area conditions are approaching those identified by management objectives, rates of impact are perceived as high, the knowledge base or inventory is lacking or incomplete, effectiveness of management actions is not known or unpredictable and if there are unpredicated changes in the area such as additional access (Inskeep,1988).

As a further consideration, due to the proximity of the mainland, an institutionalized tourist season, the Island's seasonality and accessibility of the Island, strategies to spread out tourist numbers over a longer season are not feasible. Therefore the determination of the Island's physical and social carrying capacity (or use saturation

level) would help by lending knowledge in addressing residents' concern about controlling visitor numbers and vehicles.

Investigation into the identification of the highest economic contributor (generator of income and employment) and lowest social and environmental impactor would allow for selective marketing to attract the type of tourist who will appreciate and respect local culture, heritage, etc. Although the findings may conflict with residents' stereotype of the worst type of tourist.

Redoing out past studies again would enable planners to analyze any trends. For example, in five years residents perceptions of the impacts of tourism should be accessed. This would allow planners to compare their findings to those of the past and help in making adjustments to the Town's Comprehensive Plan.

This study has shown that residents are in the position to know what is best for Block Island and therefore their concerns should be considered in all planning decisions. The study has also shown that the residents are aware of the importance of public participation in the decision making process. To maintain resident control over the Island's future residents from all socio-economic levels will have to continue to be involved in the decision making process.

Presently the New Shoreham Comprehensive Plan is being drafted. This plan addresses all aspects of growth in depth. The document is predicated on public input and is the result of the efforts of a great number of residents, past studies and more recent analysis by planning consultants. The plan is continually evolving and it is hoped that this study will be of some use in the future.

APPENDIX A.

Prices of many goods and services have increased because of increases in tourism.

0 1 2 3 4 5 6

I think that Block Island is totally dependent on the tourism industry.

0 1 2 3 4 5 6

Expanding the tourist season would be economically beneficial for the Island.

0 1 2 3 4 5 6

Increasing the number of tourists will improve the Island's economy.

0 1 2 3 4 5 6

Tourism development unfairly raises the real estate values. 0 1 2 3 4 5 6

Nonresidents should be encouraged to develop tourism related attractions or businesses. 0 1 2 3 4 5 6

Tourism has a positive impact on encouraging cultural activities (arts, crafts, music, etc.) on Block Island. 0 1 2 3 4 5 6

I feel that tourists are unaware/uncaring of our Islands lifestyle. 0 1 2 3 4 5 6

I think that tourism contributes to the maintenance of the island's historic and cultural attractions. 0 1 2 3 4 5 6

The large number of tourists are responsible for increased crime, noise, congestion, stress etc. 0 1 2 3 4 5 6

Tourism disrupts the Island's social relationships during the season.

0 1 2 3 4 5 6

Island residents are friendly and courteous to tourists. 0 1 2 3 4 5 6

Tourists are inconsiderate. 0 1 2 3 4 5 6

Tourism has a negative impact on the Island's quality of life. 0 1 2 3 4 5 6

Tourism has had a positive impact on the availability of services, health, police protection, transportation, etc. for the Island's residents. 0 1 2 3 4 5 6

The Island's capacity to absorb tourists during the peak season has already been reached. 0 1 2 3 4 5 6

Tourists are a burden on Island services. 0 1 2 3 4 5 6

Because of tourism there are more recreational opportunities (hiking trails, public access to water, etc.) for Block Island's residents. 0 1 2 3 4 5 6

Long term planning by the local government can control the impact of tourism on the Island's ecological environment. 0 1 2 3 4 5 6

More government expenditures should go towards protecting the environment rather than encouraging more tourists to visit. 0 1 2 3 4 5 6

Public hearings are a fair method of making a decision on a tourism issue. 0 1 2 3 4 5 6

The positive economic impact of Boaters outweighs their negative environmental impact to the Salt Pond. 0 1 2 3 4 5 6

Limits to the numbers of visitors to the Island should be set. 0 1 2 3 4 5 6

The control of Block Island's growth is out of the hands of the residents. 0 1 2 3 4 5 6

Tourism has not contributed to a decline in the ecological environment of Block Island any more than residential expansion. 0 1 2 3 4 5 6

A lower standard of living is worth the cost of a protected environment. 0 1 2 3 4 5 6

Because of tourism our roads and other public facilities are kept in better shape. 0 1 2 3 4 5 6

Tourism has resulted in overcrowded beaches, hiking trails, and other outdoor places for the local population. 0 1 2 3 4 5 6

The economic gains from tourism are more important than protection of the Island's environment. 0 1 2 3 4 5 6

Compared to the present there should be a reduction in the number of tourist vehicles allowed to arrive on the Island. 0 1 2 3 4 5 6

Existing controls and regulations can effectively control growth on the Island. 0 1 2 3 4 5 6

Tourists are attracted to Block Island by its natural beauty. 0 1 2 3 4 5 6

Tourists have an appreciation for the Island's sensitive ecology. 0 1 2 3 4 5 6

OPEN QUESTIONS

If you could chose any period in the Island's history in which period would you want to live on Block Island?

Do you believe promotion of a year-round tourist season on Block Island with limits for peak season would be beneficial to the Island?

What, if any, special interest groups do you belong to?

What, if any tourist activities should be promoted on Block Island?

Who is the worst type of tourist and why?

Who benefits the most from tourism on Block Island?

Are there alternatives to tourism for revenue generation on Block Island?

Additional comments or suggestions.

APPENDIX B.

In an effort to garner as much information as possible and be able to expand on the extracted factors a series of eight open ended questions was included at the end of the survey instrument (Appendix B). These questions asked the respondents to elaborate on certain aspects of tourism and the associated impacts on Block Island and the community. Space for additional comments or suggestions was included. As with any open-ended question the answers were quite diverse and subsequently had to be categorized. The following are the categorized answers to the eight open-ended questions.

QUESTION NUMBER ONE

If you could chose any period in the Island's history in which period would you want to live on Block Island? There were 72 responses to this question equaling a response rate of 82 percent. The answers ranged from "pre white man" to the "present" and have been broken down into the following 12 categories (Table 1).

QUESTION NUMBER TWO

Do you believe promotion of a year-round tourist season on Block Island with limits for peak season would be beneficial to the Island? There was an 85 percent response rate to this question. Answers were placed into the following three categories;

1. Yes = 49% (37 responses) Of this number 3% qualified their answers. Included below are a summary of the responses.

Year-round tourism would allow for twelve months of income and promote new types businesses on the Island however it must be properly carried out.

2. No = 41% (31 responses) Of this number 16% qualified their answers. Included below are a summary of their responses.

TABLE 1.

YEAR	NUMBER OF RESPONSES	PERCENTAGE OF RESPONSES
Pre-1661	5	7
1850-1890	4	6
1891-1910	12	17
1920-1930	5	7
1950-1959	3	4
1960-1970	13	18
1971-1980	5	7
1981-Present	25	35
TOTAL	72	101

The greatest number of respondents stated that winter on Block Island had nothing to offer tourists and at best transportation was "iffy". Only one respondent addressed the possibility of an expanded season or of promoting outdoor winter recreation. The second most frequent response regarded the off-season as being the Islander's private time, needed to recuperate from the summer madhouse, and

that three months was enough. Other responses mentioned that once again a few would get wealthy and everyone else exhausted.

3. Not Realistic = 9% (7 responses). Of this number all said it would be nice but who would come to Block Island in the winter.'

QUESTION NUMBER THREE

What, if any, special interest groups do you belong to? There was an 86 percent response rate to this question. Respondents listed a total of thirty nine individual commissions, groups, organizations etc. both public and private that have an impact on the community. Of the responses to the question 72 percent were identified as members of a special interest group and 28 percent indicated they were not members of any such group.

QUESTION NUMBER FOUR

What, if any, tourist activities should be promoted on Block Island? In many cases respondent's for question number four listed numerous activities. These have been distilled and placed into seven different categories. In an effort to assess priorities the first response listed by a respondent, in the vast majority of cases, provided the gist of the response and was used as the criteria for placement into specific a category. Of the 88 surveys received 73 percent responded to the question. Listed below are the categories, percentages of responses placed into those categories and activities identified within those categories.

1. Eco-Tourism Tourism: This category contained 33 percent of the responses. The responses placed into this category include; bird watching, environmental appreciation lectures and tours, hiking, guided historic walks and tours and other "green activities".

2. Outdoor Sports: This category received 27 percent of the responses. Activities in this category include; bicycling, fresh water fishing, golf, salt water fishing and scuba diving.

3. None: Fourteen percent of the responses were categorized under this heading. Of these only one qualified the response was listed "we have enough already".

4. Academics: This category received 9 percent of the responses and is defined as those responses listing educational facilities. Educational awareness and historic educational tours were placed in the Eco-Tourism Tourism category. Responses listed under the Academics category include; branch of the university, marine studies educational facility and music and art education centers.

5. Arts: Six percent of the responses were listed under this heading. Some of the responses in this category overlap with the Education category with respect to an establishing a facility. Responses in this category include; theater groups, art lectures, cultural shows, and music and dance recitals.

6. Family: The family category also received 6 percent of the responses. These include; parades, fairs, under twenty one and rainy day activities, bowling, cheap movies and family oriented outdoor recreation.

7. Retreats/Conferences: Receiving 5 percent of the responses this category includes; conference site, health spas, meditation and prayer group meetings.

QUESTION NUMBER FIVE

Who is the worst type of tourist? In the responses to this question there was a substantial proportion of overlap. For example residents identified day trippers as the hands down worst type however in qualifying the response day trippers were frequently linked with moped renters and drinkers, yielding what was deemed the very worst and a combination that needs no further qualification. Consequently the first type of bad tourist identified by the respondent was given the most weight in the criteria used in category placement. Of interest are the linkages which bond the

worst types together. Of the 88 surveys returned this question received a 90 percent response rate. The categories are listed below.

1. Day Trippers: This group received 42 percent of the vote and were linked most frequently with mopeds, drinking, litter, not contributing to the Island's economy, inconsiderate behavior, lacking appreciation for the Island's ecology and a burden on Island services.
2. Moped Riders: Receiving 20 percent of the responses this group was most frequently linked with noise, drinking, reckless driving, accidents and lack of regard for the Island's environment.
3. Inconsiderate Tourists: Thirteen percent of the respondents felt this was the worst type of tourist linking them with litter, noise, lack of appreciation for the Island's residents and natural beauty.
4. Drinkers: Identified by 10 percent of the respondents as the worst type of tourist this group was linked with day trippers, noise, rowdy behavior and lack of appreciation for the Island's natural beauty.
5. Boaters: Receiving 8 percent of the responses this group was identified as impolite, cheap and heavy drinking.
6. New Yorkers: With 5 percent of the responses this group needs no further qualification.
7. Wealthy: Three percent of the respondents linked this group with absentee land lords and flashing cash to get their way.

QUESTION NUMBER SIX

Who benefits the most from tourism on Block Island? The response rate to this question was 89 percent. As a result of numerous responses listed the first response, and any additional qualifying remarks, was used for category placement. Following is a breakdown of the categories.

1. Island Businesses: This category received 52 percent of the responses and represents; hotels, B&Bs, real estate businesses, restaurants and bicycle and moped renters. Respondents for this category generally indicated seasonal businesses and proprietors.
2. Off-Island Business: Receiving 19 percent of the responses this category includes; ferry service, airline service, off-island contractors and suppliers and service personnel.
3. Everyone: This category, 19 percent of responses, represents respondents that identified residents, both seasonal and year-round, and tourists as being benefited either directly or indirectly by tourism.
4. Absentee Landlords: This category received 10 percent of the responses and was qualified by respondents as non year-round property owners who rent their properties during the tourist season.

QUESTION NUMBER SEVEN

Are there alternatives for revenue generation on Block Island? This issue is presently being studied by the Block Island Economic Commission indicating a fair degree of concern for finding alternatives to tourism on the Island. Eighty four percent of the surveys received included responses to this question which have been placed into three categories; yes, no and not realistic.

1. Yes: Forty three percent of the respondents indicated there were alternatives to tourism for revenue generation. Their responses included; boat building, camps, cannery, cottage industries of various types (ie. Island crafts, telecommunication, computer related) cultural center, educational facilities, farming, fishing and retirement homes.

2. Not Realistic: Nineteen percent of the respondents think the idea is nice but do not believe it to be realistic. The general concensus is that nothing will be as lucrative as tourism and no one really wants to lower their standard of living.

3. No: Sixteen percent of the respondents gave a flat out no citing that the Island should play to its strength, the entire Island economy would have to be restructured and the Island would eventually be taken over by new wealthy elite.

QUESTION NUMBER EIGHT

Additional comments or suggestions. Responses to this question are listed below.

I have assumed that by tourism you mean those who arrived by ferry, boat or plane and stay in hotels or rent houses. Families who have summer residences on the island are not only more in tune with residential life but they also provide a substantial amount of tax revenue for the Town which is much needed.

All of these questions are relative to individuals.

Put in a food store to compete with the existing high priced one, the same people own the only two food markets in town.

I don't think tourism in itself has such a negative effect on B.I., its the by-product. People with a lot of money "discover" the place and they want a piece of it, for a while anyway, or they use it to turn a profit

I am in favor of a balance of tourism and other economic activities on the island. Tourism is both necessary (to a degree) and positive but Block Island's scenic and conservation assets must be preserved. Block Island's environmental beauty and its species are its greatest asset. It is what attracts tourists.

Earth first

Unfortunately I don't believe a grad student's statistical analysis of "our" opinions can outweigh business interests in the search for balance between tourism and the needs of the island.

Improved educational activities are a must. Here is an opportunity for exciting, creative educational experimentation and we are stuck with the conventional K-12 pattern that is not meeting the needs of the island's students.

So many of these questions cannot be answered yes or no or even 1-6. Its not the tourists fault that we let them "take over". The crux of the thing or paradox is that the very thing that attracted them- natural beauty and simplicity- are being destroyed. The question I have circled on page three (#6) gets to the heart of it. I fear development more that tourists. I have lived here 20 years but have vacationed here since the mid 30's.

We don't need a town manager. The one we have wants to create new jobs to spend more money, that means more taxes. The manager seems to control the town council and makes them look like whimps. Maybe we need a new town council? One that can govern themselves or at least think for themselves and not have a town manger think for them.

I think that the most important thing facing us right now is tourist management. We have the tourist trade now we need to improve it so that tourists as well as residents are more comfortable during the peak season. Basic services, traffic patterns, rules which are enforced and cooperation will all help ease the summer congestion. By promotion such things as the harbor pumpout facility, recycling, bicycling and conservation, along with our tourist promotion, we should attract a more caring and responsible crowd of people.

Until we have some control over ferry rates and schedules we will have virtually no control over tourist and visitor input. We need access management.

I and a lot of other residents believe that mopeds are a serious problem because there are too many accidents, they are noisy and the drivers go on roads where they are not allowed. We the people wish that tourists would rent bikes instead.

Fewer boats from P.J.

Many businesses are owned by off-islanders who make their money and take it back to the mainland every fall.

The encouragement of over night visitors and cottage owners and summer residents is crucial to the island. The visitors who come by boat tend to be wilder (as illustrated every year during race week) but are generally good income producers. The day trippers are income producing (gift stores and restaurants) but their disregard for the island is not worth the economic gain.

If our island government had control of the mopeds it would help. The state benefits most because of the state road.

Some questions do not touch the core of the problem. There are more distinct groups such as residents, cottagers, renters, vacationers and day trippers.

Don't like scale agree-disagree.

My greatest complaint is that the commercial sector leaves very little money behind when they close for the summer. They create a great demand for water, power, sewer, higher mostly off-island help, pay little tax to the island (check the tax records) and all the money earned leaves with them. Very little is recycled

You should have done your slide differently having disagree at 0 and not caring at three and agree at 6.

There is a great need for incentives or requirements for 1. reducing the number of cars brought to the island (ie. free parking lot at P.J. or increased ferry fees for cars and 2. public transportation on the island such as shuttle busses between the harbors and the main tourist destinations such as Mohegan Bluffs and the Light House.

The island totally depends on tourism.

Tourists, I hate them but we need them.

Block Island's best and worst character comes from its isolation. If it was bigger, more diversified (commercially) and closer to the mainland it would be like Marthas Vinyard. But Block Island is more backward in time, has a higher percentage protected land mass and people come here for that "splendor untouched". To commercialize the island is to lose that essence. If you really want to feel the island pulse come spend at least two nights attending the town financial meeting Starting May 7 at the Block Island school.

APPENDIX C.

The following is a breakdown of the responses to the socio-demographic questions on the survey. The numbers given are rounded off therefore in some cases the percentages may not equal 100 percent.

1. Residency: Respondent's mean number of years as a resident on Block Island was 13 with a range from 1 to 62. The distribution can be seen in Table C 1.

Table C 1. Respondents' Length Of Residency.

N=88		
Range=1-62		
Mean=13		
Range in Years	Number of Responses	Percentage of Responses
1	6	7
2-5	18	20
6-10	21	24
11-15	17	19
16-20	10	11
21-30	12	14
31-62	4	5
<u>Total</u>	<u>88</u>	<u>100</u>

2. Housing: This question asked if the respondent rented or owned their residence on Block Island. The results are in Table C 2.

Table C 2. Housing.

N=87		
Group	Number of Responses	Percentage of Responses
Percent Own	27	31
Percent Rent	60	69
<u>Total</u>	<u>87</u>	<u>100</u>

3. Heritage: This question referred to the number of generations the respondent's families have resided on Block Island. The results are presented in Table C 3.

Table C.3. Heritage.

N=87		
Range=1-13		
Mean=2.4		
Generations	Number of Responses	Percentage Of Responses
1-2	69	79
3-13	18	21
<u>Total</u>	<u>87</u>	<u>100</u>

4. Occupation: This question had nine categories of job type. None of the respondents were unemployed therefore that category was deleted. The breakdown in frequencies of response are presented in Table C 4.

Table C 4. Occupation.

N=88		
Occupation	Number Of Responses	Percentage Of Responses
Retired	7	8
Semiretired	8	9
Retail/Sales	17	19
Labor/ Trade	15	17
Homemaker	5	6
Professional/Exec.	14	16
Student	11	13
Government	11	13
<u>Total</u>	<u>88</u>	<u>101</u>

5. Tourism related employment: This question asked the respondents to declare the percentage of their work that is related to or dependent on tourism. It is not known if the omitted responses indicate a 0 percent relationship or dependency on tourism or if 19 percent of the respondents simply chose not to respond. The results are presented in Table C 5.

Table C 5. PERCENT OF EMPLOYMENT RELATED TO OR DEPENDENT ON TOURISM

N=71		
Range=1-100		
Mean=54		
Range in Percent	Number of Responses	Percentage of Responses
0	13	18
1-10	6	8
11-25	3	4
26-50	11	15
51-75	10	14
76-100	28	39
<u>Total</u>	<u>71</u>	<u>99</u>

6. Income: This question identifies the respondents in terms of income. There are six categories of income. The results are presented in Table C 6.

Table C 6. Income

Income	Number Of Responses	Percentage Of Responses
\$0- 9,999	12	14
\$10,000-19,999	26	31
\$20,000-29,999	17	20
\$30,000-39,999	4	5
\$40,000-49,999	7	8
\$50,000 and greater	8	21
<u>Total</u>	<u>84</u>	<u>99</u>

APPENDIX D.

TABLE D 1. MULTIPLE AND BIVARIATE REGRESSION OF DEMOGRAPHIC VARIABLES ON FACTOR SCORES: ECONOMIC FACTOR 1.

MULTIPLE REGRESSION	N	F-ratio	d.f.	Sq. Mult. R
	60	2.309	5, 54	.176
BIVARIATE REGRESSION VARIABLE				
Residency	82	0.106	1, 81	.001
Housing	81	0.153	1, 79	.002
Island Heritage	81	2.207	1, 79	.027
Tourism Related Employment (%)	66	<u>5.341</u>	1, 64	.077
Income	78	3.180	1, 76	.040

Note: Underlined F-ratio is significant at the .05 level.

TABLE D 2. MULTIPLE AND BIVARIATE REGRESSION OF DEMOGRAPHIC VARIABLES ON FACTOR SCORES: ECONOMIC FACTOR 2.

MULTIPLE REGRESSION	N	F-ratio	d.f.	Sq. Mult. R
	60	1.132	5, 54	.095
BIVARIATE REGRESSION VARIABLE				
Residency	82	0.032	1, 80	.001
Housing	81	0.362	1, 79	.005
Island Heritage	81	1.632	1, 79	.020
Tourism Related Employment (%)	66	0.829	1, 64	.013
Income	78	1.027	1, 76	.013

Note: Underlined F-ratio is significant at the .05 level.

TABLE D 3. MULTIPLE AND BIVARIATE REGRESSION OF DEMOGRAPHIC VARIABLES ON FACTOR SCORES: SOCIAL FACTOR 1.

MULTIPLE REGRESSION	N	F-ratio	d.f.	Sq. Mult. R
	63	<u>3.180</u>	5, 57	.214
BIVARIATE REGRESSION VARIABLE				
Residency	84	0.127	1, 82	.002
Housing	83	0.169	1, 81	.002
Island Heritage	83	2.773	1, 81	.033
Tourism Related Employment (%)	69	1.580	1, 67	.023
Income	80	<u>7.695</u>	1, 78	.090

Note: Underlined F-ratio is significant at the .05 level.

TABLE D 4. MULTIPLE AND BIVARIATE REGRESSION OF DEMOGRAPHIC VARIABLES ON FACTOR SCORES: SOCIAL FACTOR 2.

MULTIPLE REGRESSION	N	F-ratio	d.f.	Sq. Mult. R
	63	0.452	5, 57	.038
BIVARIATE REGRESSION VARIABLE				
Residency	84	0.724	1, 82	.009
Housing	83	1.473	1, 81	.018
Island Heritage	83	0.000	1, 81	.000
Tourism Related Employment (%)	69	0.067	1, 67	.001
Income	80	1.599	1, 78	.020

Note: Underlined F-ratio is significant at the .05 level.

**TABLE D 5 MULTIPLE AND BIVARIATE REGRESSION OF
DEMOGRAPHIC VARIABLES ON FACTOR SCORES: ENVIRONMENTAL
FACTOR 1.**

MULTIPLE REGRESSION	N	F-ratio	d.f.	Sq. Mult. R
	61	0.645	5, 55	.055
BIVARIATE REGRESSION VARIABLE				
Residency	82	0.231	1, 80	.003
Housing	81	0.876	1, 79	.011
Island Heritage	81	1.111	1, 79	.014
Tourism Related Employment (%)	67	1.644	1, 65	.025
Income	78	1.200	1, 76	.003

Note: Underlined F-ratio is significant at the .05 level.

**TABLE D 6. MULTIPLE AND BIVARIATE REGRESSION OF
DEMOGRAPHIC VARIABLES ON FACTOR SCORES: ENVIRONMENTAL
FACTOR 2.**

MULTIPLE REGRESSION	N	F-ratio	d.f.	Sq. Mult. R
	61	<u>3.328</u>	5, 55	.232
BIVARIATE REGRESSION VARIABLE				
Residency	82	2.608	1, 80	.032
Housing	81	0.648	1, 79	.008
Island Heritage	81	<u>7.629</u>	1, 79	.088
Tourism Related Employment (%)	67	<u>4.479</u>	1, 65	.065
Income	78	0.573	1, 76	.007

Note: Underlined F-ratio is significant at the .05 level.

**TABLE D 7. MULTIPLE AND BIVARIATE REGRESSION OF
DEMOGRAPHIC VARIABLES ON FACTOR SCORES: ENVIRONMENTAL
FACTOR 3.**

MULTIPLE REGRESSION	N	F-ratio	d.f.	Sq. Mult. R
	61	2.210	5, 55	.167
BIVARIATE REGRESSION VARIABLE				
Residency	82	2.139	1, 80	.026
Housing	81	0.362	1, 79	.022
Island Heritage	81	0.050	1, 79	.001
Tourism Related Employment (%)	67	1.029	1, 65	.016
Income	78	<u>5.176</u>	1, 76	.064

Note: Underlined F-ratio is significant at the .05 level.

**TABLE D 8. MULTIPLE AND BIVARIATE REGRESSION OF
DEMOGRAPHIC VARIABLES ON FACTOR SCORES: HOLISTIC FACTOR 1.**

MULTIPLE REGRESSION	N	F-ratio	d.f.	Sq. Mult. R
	56	0.419	5, 50	.040
BIVARIATE REGRESSION VARIABLE				
Residency	75	0.916	1, 73	.012
Housing	74	1.390	1, 72	.019
Island Heritage	74	1.291	1, 72	.018
Tourism Related Employment (%)	62	2.079	1, 60	.033
Income	71	0.140	1, 69	.002

Note: Underlined F-ratio is significant at the .05 level.

TABLE D 9. MULTIPLE AND BIVARIATE REGRESSION OF DEMOGRAPHIC VARIABLES ON FACTOR SCORES: HOLISTIC FACTOR 2.

MULTIPLE REGRESSION	N	F-ratio	d.f.	Sq. Mult. R
	56	1.739	5, 50	.148
BIVARIATE REGRESSION VARIABLE				
Residency	75	0.070	1, 73	.001
Housing	74	0.252	1, 72	.003
Island Heritage	74	2.398	1, 72	.032
Tourism Related Employment (%)	62	1.972	1, 60	.032
Income	71	1.185	1, 69	.017

Note: Underlined F-ratio is significant at the .05 level.

TABLE D 10 MULTIPLE AND BIVARIATE REGRESSION OF DEMOGRAPHIC VARIABLES ON FACTOR SCORES: HOLISTIC FACTOR 3.

MULTIPLE REGRESSION	N	F-ratio	d.f.	Squared Mult. R
	56	2.330	5, 50	.189
BIVARIATE REGRESSION VARIABLE				
Residency	75	0.416	1, 73	.006
Housing	74	2.437	1, 73	.033
Island Heritage	74	1.797	1, 72	.024
Tourism Related Employment (%)	62	0.254	1, 60	.004
Income	71	7.167	1, 69	.094

Note: Underlined F-ratio is significant at the .05 level.

**TABLE D 11 MULTIPLE AND BIVARIATE REGRESSION OF
DEMOGRAPHIC VARIABLES ON FACTOR SCORES: HOLISTIC FACTOR 4.**

MULTIPLE REGRESSION	N	F-ratio	d.f.	Sq. Mult. R
	56	<u>3.068</u>	5, 50	.235
BIVARIATE REGRESSION VARIABLE				
Residency	75	0.904	1, 73	.012
Housing	74	0.541	1, 72	.007
Island Heritage	74	0.128	1, 72	.002
Tourism Related Employment (%)	62	1.972	1, 60	.032
Income	71	<u>7.453</u>	1, 69	.097

Note: Underlined F-ratio is significant at the .05 level.

BIBLIOGRAPHY

- Allen, L., P. Long, R. Perdue and S. Kieslelbach. "The Impact of Tourism Development on Residents' Perception of Community Life." Journal of Travel Research. Vol. 27, No. 21 (Summer 1988): 16-21.
- Armore, S. Introduction to Statistical Analysis and Inference. New York: John Wiley and Sons, 1966.
- Bannon, J. Leisure Resources: Its Comprehensive Planning. New Jersey: Prentice-Hall, 1976.
- BarOn, R. R. Seasonality in Tourism. London: The Economist Intelligence Unit Ltd., 1975.
- Benson, F. Research, Reflection and Recollections of Block Island. Westerly, R. I.: The Utter Company, 1977.
- Blalock, H. Social Statistics. New York: McGraw-Hill, 1960.
- Block Island Historical Society, "History of Block Island." Occasional Papers, No. 1, Block Island: Block Island Historical Society (1946).
- Block Island Times (Block Island). 1 August 1990 - 30 October 1991.
- Brydon, J. Tourism and Development: A Case Study of the Commonwealth Caribbean. New York: Cambridge University Press, 1973.
- Burkart, A. J., and S. Medlik. Tourism Past, Present and Future. London: Cox and Wyman, 1974.

- Cattell, R. "Factor Analysis: An Introduction to Essentials. (II) The Role of Factor Analysis in Research." Biometrics, Vol. 21 (1965): 405-435.
- Charlier, R. H. "Coastal Zone: Occupancy, Management and Economic Competitiveness." Ocean and Shoreline Management, Vol. 12 (1989): 383-402.
- Clark, J. Coastal Resource Management: Development Case Studies. Publication of the Research Planning Institute, ed. J. Clark, no. 3. Columbia, South Carolina: Research Planning Institute Inc., 1983. pp. 591-619.
- Cleland, J., and S. Singh. "Islands and the Demographic Transition." World Development, Vol. 8, No. 12 (1980): 969-993.
- Comprey, A. A First Course in Factor Analysis. New York: Academic Press, 1973.
- Cooke, K. "Guidelines for Socially Appropriate Tourism Development in British Columbia." Journal of Travel Research, Vol. 21, No. 1 (Summer 1982): 22-27.
- Cooper, C., and S. Jackson. "Destination Life Cycle: The Isle of Man Case Study." Annals of Tourism Research, Vol. 16 (1989): 377-398.
- Crompton, J. "Motivations for Pleasure Vacation." Annals of Tourism Research, Vol. 6, No. 4 (1979): 408-424.
- Dommen, E. "Some Distinguishing Characteristics of Islands." World Development, Vol. 8, No. 12 (1980): 931-943.
- Downing, P. B., and J. E. Frank. "Recreational Impact Fees: Characteristics and Current Usage." National Tax Journal, Vol. 36, No. 4 (1984): 477-492.

- Edwards, E. "The U. K. Heritage Coasts: An Assessment of the Ecological Impacts of Tourism." Annals of Tourism Research, Vol. 14 (1987): 71- 87.
- Ellis, R. Statistical Inference: Basic Concepts. New Jersey: Prentice-Hall, 1975.
- Everett and Associates. Block Island Comprehensive Plan, Everett and Associates Planning Consultants: 48 Barnes St., Providence Rhode Island, 1976.
- Everett and Associates. Block Island Comprehensive Plan, Everett and Associates Planning Consultants: 48 Barnes St., Providence Rhode Island, 1986.
- Ezekiel, M., and K. Fox. Methods of Correlation and Regression Analysis. New York: John Wiley and Sons, 1959.
- Farrel, B. R. Hawaii, The Legend that Sells. Honolulu: The University Press of Hawaii, 1982.
- Gotlieb, A. "American's Vacations." Annals of Tourism Research, Vol. 9, No. 2 (1982): 165-187.
- Gray, H. International Travel-International Trade. Lexington: D. C. Heath, 1970.
- Gunn, C. Tourism Planning. New York: Belhaven Press, 1979.
- Gunn, C. "An Approach To Regional Assessment of Tourism Development Potential." in Tourism Planning and Development Issues, ed. D. Hawkins, E. Shafer, and J. Rovelstad, pp. 260-276. Washington, D. C. : George Washington University Press, 1980.

- Hartmann, R. "Tourism, Seasonality and Social Change." Leisure Studies, Vol. 5, No. 1 (1986): 25-34.
- Herr and Associates. "Town of New Shoreham: Growth and Comprehensive Plan." Prepared for the New Shoreham Planning Board by Herr and Associates, Planning Consultants: Newton, MA. May 26, 1991.
- Inskeep, E. "Environmental Planning for Tourism." Annals of Tourism Research, Vol. 14 (1987): 118-134.
- Inskeep, E. "Tourism Planning." Journal of the American Planning Association, Vol. 54, No. 3 (Summer 1988): 360-372.
- Ives, S. M., and F. J. Owen. "Community Response to Coastal Erosion: The View from Two North Carolina Beach Areas." Ocean and Shoreline Management, Vol. 11 (1988): 177-193.
- Joreskog, K., J. Klovan, and R. Reyment. Geological Factor Analysis. Amsterdam: Elsevier Publishing, 1976.
- Jubenville, A., and R. Becker. "Outdoor Recreation Management Planning: Contemporary Schools of Thought". in Recreation Planning and Management, ed. S. Lieber and D. S. Fesenmaier, pp. 303-320. State College Pennsylvania: Venture Publishing, 1983.
- Kaul, R. N. Dynamics of Tourism: The Phenomenon. India: Sterling Publishers, 1985.
- Knopp, T. B. "The Local Interests and the Function of Public Lands." in Tourism Planning and Development Issues, ed. D. Hawkins, E. Shafer and J. Rovelstad, pp. 225-239. Washington D. C.: George Washington University Press, 1980.

- Koppleman, L. E., and D. S. Davis. "Citizen Education and Participation." In Coastal Zone 87: Proceedings of the Symposium on Coastal and Ocean Management Held in Seattle Washington, 11-15 May 1987, ed. O. Magoon, pp. 2237-2246. New York: American Society of Civil Engineers, 1987.
- Krutilla, J. V., and J. L. Knetsch. "Outdoor Recreation Economics." in Land and Leisure: Concepts and Methods in Outdoor Recreation, ed. D. Fisher, J. Lewis and G. Priddle, pp. 167-174. Chicago: Maaroufa Press Inc., 1974.
- Lever, A. "Spanish Tourism Migrants: The Case of Lloret de Mar." Annals of Tourism Research, Vol. 14, No. 4 (1987): 449-470.
- Lewis-Beck, M. Applied Regression: An Introduction. in Sage University Paper Series on Quantitative Applications in the Social Sciences, No. 22. Beverly Hills and London: Sage Publications, 1980.
- Liu, J. "Relative Economic Contributions of Visitor Groups in Hawaii." Journal of Travel Research, Vol. 25, No. 4 (Summer 1986): 2-9.
- Liu, J., and T. Var. "Resident Attitudes Toward Tourism Impacts in Hawaii." Annals of Tourism Research, Vol. 13(1986): 193-214.
- Liu, J., P. J. Sheldon, and T. Var. "Residential Perception of the Environmental Impacts of Tourism." Annals of Tourism Research, Vol. 14 (1987): 17-37.
- Livermore, S. History of Block Island. Hartford, CT.: Lockwood and Brainard Co., 1877.
- Long, P., R. Perdue, and L. Allen. "Rural Resident Tourism Perceptions and Attitudes by Community Level of Tourism." Journal of Travel Research, Vol. 28, No. 3 (Winter 1990): 3-9.

- Manheim, P. and T. J. Tyrrell, The Social and Economic Impacts of Tourism on Block Island: A Case Study. (University of Rhode Island: Publications Unit, Marine Advisory Service 1986) NOAA/Sea Grant, NA85AA-D-SG094.
- Manning, R. Studies in Outdoor Recreation: Search and Research for Satisfaction. Oregon: Oregon State University Press, 1986.
- McEacheran, J. and E. L. Towle. Ecological Guidelines For Island Development. International Union For Conservation Of Nature And Natural Resources, Publication Series, No. 30. Switzerland: Morges, 1974.
- McEvoy, J., and T. Dietz. (eds.) Handbook for Environmental Planning: The Social Consequences of Environmental Change. New York: John Wiley and Sons, 1977.
- McIntosh R., and S. Gupta. Tourism: Principles, Practices, Philosophies. Columbus, Ohio: Grid Publishing, 1980.
- Mieczkowski, Z. World Trends in Tourism and Recreation. New York: Peter Lang Publishing, 1990.
- Mill, R. C., and A. M. Morrison. The Tourism System: An Introductory Text. Englewood Cliffs, N.J.: Prentice-Hall, 1985.
- Milman, A., and A. Pizam. "Social Impact of Tourism on Central Florida." Annals of Tourism Research, Vol. 15 (1988): 191-204.
- Murphy, P. E. "Tourist Centers: A Guide to Planning Strategy." in Tourism Planning And Development Issues, ed. D. Hawkins, E. Shafer and J. Rovelstad, pp. 355-364. Washington, D. C.: George Washington University Press, 1980.

- Murphy, P. E. "Perceptions and Attitudes of Decision Making Groups in Tourism Centers." Journal of Travel Research, Vol. 12, No. 3 (Winter 1983): 8-12.
- On-Kim, J., and C. Mueller. Factor Analysis: Statistical Methods and Practical Issues. Sage University Paper Series on Quantitative Applications in the Social Sciences, 13. Beverly Hills and London: Sage Publications, 1978.
- On-Kim, J., and C. Mueller. Introduction to Factor Analysis: What Is It and How to Do It. Sage University Paper Series on Quantitative Applications in the Social Sciences, 13. Beverly Hills and London: Sage Publications, 1979.
- Pearce, D. Tourist Development. Second Edition. New York: John Wiley and Sons, 1989.
- Peck, G. J., and A. S. Lepie. "Tourism Development in Three North Carolina Towns" in Hosts and Guests, ed. V. Smith. Philadelphia: University of Pennsylvania Press.
- Perdue, R. R., P. T. Long, and L. Allen. "Rural Resident Tourism Perceptions and Attitudes." Annals of Tourism Research, Vol. 14 (1987): 420-429.
- Peterson, G. L. "Rationing and Redistribution of Scarce Resources with Limited Carrying Capacity" in Recreation Planning and Management, ed. S. Lieber and D. S. Fesenmaier, pp. 386-402. State College Pennsylvania: Venture Publishing, 1983.
- Petrillo, J. "How to Save a Resource. In Coastal Zone 87: Proceedings of the Symposium on Coastal and Ocean Management Held in Seattle Washington, 11-15 May 1987, ed. O. Magoon, 2783-2793. New York: American Society of Civil Engineers, 1987.

Pitt, D. "Sociology, Islands and Boundaries." World Development, Vol. 8, No. 12 (1980): 1051-1059.

Pizam, A. "The Social Costs to the Destination Community as Perceived by its Residents." Journal of Travel Research, Vol. 16, No. 4 (1978): 8-12.

Rhode Island Basic Economic Statistics: 1989-1990. by Research Division: Rhode Island Department of Economic Development, Providence, R. I., 1990.

Roehl, W. S. and D. R. Fesenmaier. "Tourism Land Use Conflict in the United States" in Recreation Planning and Management, ed. S. Lieber and D. S. Fesenmaier, pp. 472-485. State College Pennsylvania: Venture Publishing, 1983.

Rosenow, J., and G. Pulsipher. Tourism: The Good, the Bad and the Ugly. Lincoln, Nebraska: Century Three Press, 1979.

Rosner, J. B. "Making Bureaucrats Responsive: A Study of the Impact of Citizen Participation and Staff Recommendations on Regulatory Decision Making." Public Administration Review, Vol. 12 (July/August 1982): 339-345.

Selwyn, P. "Smallness of Islands." World Development, Vol. 8, No. 12 (1980): 945-951.

Sheffield, W. A Historical Sketch of Block Island. Newport, R. I.: J. P. Sanborn, 1876.

Shelby, B., and T. A. Heberlein. Carrying Capacity in Recreational Settings. Corvallis, Oregon: Oregon State University Press, 1986.

Sheldon, P. J., and T. Var. "Resident Attitudes to Tourism in North Wales." Tourism Management, Vol. 5, No. 1 (1984): 174-186.

- Smith, V. (ed.) Hosts and Guests: The Anthropology of Tourism. Philadelphia: University of Pennsylvania Press, 1989.
- Spradley, J. The Ethnographic Interview. New York: Holt, Rhinehart and Winston, 1979.
- Taylor, S., and M. Carter. "Using Tourism in Regional Development: Planning for Tourism in Scotland" in Tourism Planning and Development Issues, ed. D. Hawkins, E. Shafer and J. Rovelstad, pp. 295-310. Washington, D. C.: George Washington University Press, 1980.
- Town of New Shoreham Monograph. by Research Division: Rhode Island Department of Economic Development, Providence, R. I., 1977.
- Travel and Leisure. World Travel Overview 1987/1988. New York: American Express Publishing, 1987.
- Tuppen, J. "France: The Changing Character of a Key Industry" in Tourism and Economic Development, ed. A. Williams and G. Shaw, pp. 180-195. New York: Belhaven Press, 1988.
- Um, S., and J. Crompton. "Measuring Resident's Attachment Levels in a Host Community." Journal of Travel Research, Vol. 26, No. 1 (Summer 1987): 27-29.
- United Nations, O.C.E.D. Organization for Economic Cooperation and Development. Publications and Information Center, The Impact of Tourism on the Environment: General Report, 1980.

- United Nations, UNESCO-MAB. Sustainable Development and Environmental Management of Small Islands, ed. W. Beller, P. d'Ayala, and P. Hein. UNESCO Man and the Biosphere Series, Vol. 5, pp. 386-388. Paris: UNESCO Paris and The Parthenon Publishing, 1990.
- United Nations, UNESCO. "Islands at Risk." The Courier, No. 10 (October 1978): 20-22.
- Wilkinson, L. SYSTAT: The System for Statistics Version 3.2. Evanston, IL: SYSTAT, Inc., 1987.
- Wilkinson, P. "Tourism in Small Island Nations: A Fragile Dependence." Leisure Studies, Vol. 6, No. 2 (1987): 127-146.
- Williams, A., and G. Shaw. "Western European Tourism in Perspective." Tourism and Economic Development, ed. A. Williams and G. Shaw, pp. 12-39. New York: Belhaven Press, 1988.
- Yapp, G. A. "Aspects of Population, Recreation and Management of the Australian Coastal Zone." Coastal Zone Management Journal, Vol. 14, No. 1/2 (1986): 47-65.