Spatial Behavior in a Bahamian Resort

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Abstract:

The purpose of this study is to understand better the spatial behavior of tourists visiting spatially confined resort destinations. Based on a time-budget study of the intradestination travel patterns of 795 tourists visiting Paradise Island (Bahamas), the travel behavior of tourists was found to be heterogeneous. The spatial equivalent of the allocentric tourist seemed more likely to venture beyond the Paradise Island resort area during their stay. Only the psychocentric tourist seemed reluctant to leave the island under any conditions. In the context of international resort tourism, the space-time constraints are found to be more important than the socioeconomic descriptors in explaining the different typologies of spatial behavior.

Résumé

Le comportement dans l'espace dans une station balnéaire bahamienne. Le propos de la présente étude est de contribuer á la compréhension du comportement dans l'espace des touristes qui visitent des destinations de vacances dont le terrain est limité. Selon une étude de l'utilisation du temps de 795 touristes dans leurs mouvements á l'intérieur de leur lieu de destination, dans ce cas l'Lle du Paradis (Bahamas), le comportement des touristes dans l'espace est hétérogène. Pour l'équivalent dans l'espace du touriste allocentrique, il était plus probable qu'il s'aventure pendant son séjour au-delá de la station de l'Ile du Paradis. Il n'y avait que le touriste psychocentrique qui semblait peu disposé à quitter l'Île dans quelles que soient les conditions. Dans le contexte du tourisme international aux lieux de séjour, les contraintes de temps-espace se sont avérées plus importantes que les facteurs socio-économiques pour expliquer les différentes typologies du comportement dans l'espace.

Article:

International tourism is a major growth industry, and much of this growth is concentrated in specific resort destinations. Although the spatial structure of many of these resort areas is well documented (Bounds 1978; Gormsen 1982; Potter 1981), very little is known about where tourists go during their stay.

Hills and Lundgren (1977) and Britton (1982) have theorized that tourist development in the Caribbean and the South Pacific is frequently characterized by self-contained resorts that encourage tourists to remain near the place of stay. Britton suggested that tourists arriving at the international airport of a Third World country are immediately transported to a resort area. Upon arrival within the resort, according to Hills and Lundgren, only a limited amount of travel would occur to areas outside the resort area. Many of these resort destinations, particularly in the Caribbean and South Pacific, tend to be controlled by foreign-owned, multinational corporations. Consequently, tourists who spend a large percentage of their time in these spatially tsolated resort areas tend to have a negligible economic impact on the more distant, and frequently locally owned, attractions.

Empirical research in Spain (Gavirfa in Pearce 1988) and Tunisia (Groupe Huit 1979) support the idea that tourist activity patterns can be spatially constrained. However, Pearce (1987:93) has suggested that in some cases, the spatial behavior of tourists may "indicate a greater mobility within the territory than the models of Hills and Lundgren, and Britton might suggest." Clearly, more theoretical and empirical research is required before definitive statements can be made about how tourists explore different types of resort destinations. Furthermore, understanding the spatial behavior of tourists is becoming increasingly significant as the economic stature of the tourist industry rapidly grows. If more detailed information were available about the factors affecting tourist activity patterns, it might be possible to better anticipate development trends and to minimize the many negative impacts commonly associated with the international tourist industry (de Kadt 1979; L ea 1988; Mathieson and Wall 1982; Turner and Ash 1975).

Therefore, the broadly stated objective of this paper is to describe and explain the spatial behavior of tourists at the intradestination scale. It is hypothesized that international mass-market resort destinations that were initially designed to encourage spatially confined activity patterns can simultaneously attract visitors who are interested in attractions some distance from the resort area. More importantly, although the spatial behavior of all tourists is heterogeneous to a degree, the intent of this paper is to describe and explain why fundamental differences in spatial behavior can exist in mass-market resort destinations.

DETERMINANTS OF TOURIST BEHAVIOR

There are as many motives and personalities for travel as there are different types of resort developments. Tourists motivated by different factors can make substantially different demands on resort destinations, and fundamentally alter the geography of intradestination travel patterns. However, although an examination of the motivational and personality typologies of the tourist is

important, it also "relegates the examination of spatial behavior outcomes to a peripheral position" (Cooper 1981:362). Therefore, in this study, the discussion of tourist typologies will extend only so far as it relates to the spatial behavior of tourists.

Murphy (1985) suggested two general categories of tourist typologies: interactional types that emphasize visitor-destination interactions (Cohen 1972; Smith 1977), and cognitive-normative models that analyze the motivations behind travel (Plog 1973, 1987). From a geographical point of view, what is important about all these models is the extent to which tourist typologies and travel preferences can create different patterns of spatial behavior. For example, Plog's model of tourist personality types suggested that the market for a given resort destination changes over time and that different types of travelers will visit different destinations. Plog's model is a particularly appropriate theoretical base for this study because it was developed with the United States traveler in mind, and most visitors to the case study area (Paradise Island, Bahamas) come from the United States.

Plog (1973) argued that tourists were unlikely to visit many attractions beyond the immediate resort area in resort destinations that were relatively familiar to the visitor, and where the primary motivation is frequently to relax and sunbathe. On the other hand, Plog also indicated that tourists visiting more distant destinations with fundamentally different cultures, cuisines, and institutions would be more adventurous and curious. Plog suggested that these different personality typologies are distributed normally on a continuum from the "psychocentric" who preferred the familiar in travel destinations and had low activity levels, through the "allocentric" who tended to be more inquisitive and curious (Figure 1). "Midcentrics,' according to Plog, tended to be those tourists who preferred some combination of familiarity and exoticism.

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Plog suggested that the U.S. market for a resort destination will change over time, attracting mainly one of the personality typologies listed earlier. He argued that resorts in the Caribbean that are more familiar to U.S. tourists would mainly attract midcentrics, while more distant resort destinations in the South Pacific would attract allocentrics (because the South Pacific islands are less familiar and more exotic). The geographic implications of Plog's generalized model are that certain resort destinations tend to attract one dominant personality type with very similar travel preferences. However, it is argued in this paper that even in relatively homogeneous mass-market resort destinations like Paradise Island, the Bahamas, a normally distributed continuum of tourist personality typologies is evident. These different personality typologies can also produce fundamentally different forms of spatial behavior.

In concentrating on the spatial outcomes of tourist behavior, this paper is less concerned about operationalizing different personality types. Instead, this study focuses on the spatial expression of personality (by measuring trip behavior) in the belief that spatial behavior can be an effective surrogate of tourist personality. It is well established that overt spatial behavior is, in part, a

function of various images and cognitive processes that are in turn influenced by personality and motivation. In formulating a paradigm for enhancing the theoretical study of human behavior in spatial settings, Golledge and Stimson (1987) argued that various personality variables can play a key role in determining spatial choice processes. In tourism, Plog's research suggests that "tourists with different personalities will seek different travel experiences, selecting particular forms of travel and types of destinations" (Pearce 1987:24). Implicit to this argument is the notion that different personalities and motivations will produce geographically different forms of spatial behavior. Some empirical evidence for this viewpoint is provided by Murphy (1974:208), who concluded that the spatial search patterns of tourists visiting Vancouver Island was "closely related to their prior mental image and motivations."

In explaining the differences in the spatial behavior of tourists, this paper analyzes the more tangible socioeconomic characteristics of individuals, the temporal and spatial constraints, and various trip characteristics (Table 1). The contention is that these variables can effectively discriminate between different patterns of tourist spatial behavior. Research suggests that spatial preferences are conditioned, in part, by the temporal constraint and the spatial structure of the environment (Burnett 1980; Desbarats 1983). For example, the limited time available to explore a destination ensures that leisure trips are highly sensitive to the temporal constraint (Landau, Prashker, and Hirsh 1981). Furthermore, a tourist staying in a large, self-contained hotel may be inclined to remain close to the place of stay because of the variety of easily accessible facilities close at hand (Britton 1982; Hills and Lundgren 1977). On the other hand, the distance traveled to reach the destination and the mobility levels of the individual can also influence spatial behavior. The further someone has to travel to reach a resort, the more expensive the trip becomes, and the longer they tend to stay; therefore, the more they see and do. Finally, tourists who rent or own some form of transportation during their vacation should also be more spatially adventurous.

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However, spatial behavior is also determined by an individual's sociodemographic characteristics. For example, the more affluent and the well educated tend to be more mobile (Gayler 1980; Hanson and Hanson 1981; Pas 1984), while the elderly and children tend to be the most spatially constrained (Driver and Tocher 1979). Cooper (1981:361) indicated that "it is now generally recognized that recreation behavior varies along two dimensions: a life-cycle dimension and a social class dimension." It would, therefore, be expected that age, education, household income, and occupation act to discriminate between the spatial behavior patterns of tourists.

Other factors that seem to play a pivotal role in determining the spatial distribution of tourist travel include the type of travel arrangements, familiarity, and party size. First, it is well established that the independent traveler who makes his or her own travel arrangements tends to travel further afield compared to the packaged tour tourist (Britton 1982; Cohen 1972; Husbands

1986). A packaged holiday is defined in this paper as any travel arrangement where the airfare, hotel, and possibly some other service is purchased for a single all inclusive price. Second, the familiarity of the tourist with any given resort destination can also produce different forms of spatial behavior. Repeat visitors to specific destinations will be more familiar with the tourist product and may act differently to first-time visitors when exploring resort areas. Third, the size of the immediate travel group can condition spatial behavior. The collective decision making associated with large travel groups can tend to complicate spatial outcomes, while the smaller group markets may be "driven" by their own unique spatial dynamics. For example, the important couple/honeymoon market may have very different spatial behaviors to other groups.

CASE STUDY AREA

The Bahamas is an archipelago of 700 islands situated off the coast of Florida, extending south and east for about 1,000 miles into the Atlantic Ocean (Figure 2). Tourism is a natural product that is being developed mainly for North Americans. The Bahamas was selected as the case study area because of the critical importance of the tourist industry to the Bahamian economy. Tourism generates about 75% of household income and nearly 60% of government revenue (Bahamas Ministry of Tourism 198 1).

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The bulk of the tourist product in the Bahamas is located in two major resort developments (Paradise Island and Cable Beach), which are both a short distance from the capital city of Nassau on New Providence Island (Figure 2). In terms of the number of hotel rooms, both resort destinations are equivalent in size and together account for almost 50% of the 12,480 hotel rooms available in the Bahamas (Bahamas Ministry of Tourism 1989). However, the Cable Beach resort was undergoing extensive reconstruction during the study period. Instead, the Paradise Island resort complex was chosen as the case study area.

Paradise Island is a clearly bounded spatial unit with specific entry and exit points. The island is situated one-quarter mile to the northeast of the city of Nassau and New Providence Island and is one of the largest resort developments in the Bahamas or the Caribbean. In 1985, over 320,000 visitors stayed on Paradise Island, further solidifying the position of the resort island as one of the region's leading vacation destinations (Bahamas Ministry of Tourism 1989). Although the island is accessible to Nassau by bridge or water taxi, the resort is relatively self-contained in terms of the range and number of facilities. The tourist product on the island includes continuous white sandy beaches, several large multinational hotels, restaurants, and casino facilities. Grossman (1986: 1) suggested that "everything that the visitor needs or wants is right here on Paradise Island, he really doesn't have to search for what he wants." The implication is that most tourists visiting this destination should remain close to the place of stay. However, it should also be said that Paradise Island does not restrain tourists either physically or psychologically; they

might choose not to leave, but there are few barriers or constraints to leaving if they have the slightest interest in

doing so.

Research Design

Many researchers have indicated that the time-budget approach can be effective when examining activity patterns (Anderson 1971; Cosper and Shaw 1985; Pearce 1988).

> A time-budget is a systematic record of a person's use of time over a given period. It describes the sequence, timing, and duration of the person's activities, typically for a short period ranging from a single day to a week. As a logical extension of this type of record, a spacetime budget includes the spatial coordinates of activity location. (Anderson 1971:353)

This approach was adopted in a time-budget exit survey of 924 tourists that was conducted in the departure lounge of the Nassau International Airport during the summer of 1986. Most of the surveying was completed during the month of July, which tended to be a representative month with respect to the yearly averages for length of stay, hotel occupancy rates, and the total number of arrivals. All individuals entering the airport departure lounge were asked if they had stayed in accommodations on Paradise Island during their vacation, and every fifth individual who had stayed on the island was asked to participate in the survey. Recall did not appear to be a significant problem, although some of the responses were too vague for analytical purposes, and only 795 of the 924 surveys were actually included in the analysis.

Each individual was asked to complete a "recall" travel diary indicating where they went and what they did during their vacation. Tourists recalled the temporal sequence of activities, and the location of each of these activities, during their stay in the Bahamas. The travel diary included explicit instructions that encouraged respondents to list the place-name location of their activity. More than 30 different activities were reported in this study ranging from sunbathing, dining, and shopping to sightseeing, gambling, and deep-sea fishing. Furthermore, tourists visited more than 60 different locations in the tourist system when pursuing these activities. The locations included 17 hotels, over a dozen "nonhotel-related" restaurants, and several other visitor attractions (e.g., several casinos, beaches, other islands, historic forts, and tropical gardens). To convert the written responses of each travel diary into a comparable data base suitable for statistical analysis, each of the 30 activities and 60 locations reported in this study was assigned a specific numeric code.

Each day of the travel diary was split into discrete time periods in order to structure the questionnaire and simplify the classification process. An approach similar to that used in Cooper's (1981) study of tourist behavior in the Channel Islands was adopted. Tourists were asked to record movements over the first 6 days of their vacation, each day being split into 5

time periods (morning, lunch, afternoon, dinner, and evening). More explicit time intervals were not used because the focus of this study was on identifying fundamental differences in intradestination travel patterns rather than the specific timing of tourist activities. Travel diaries were also limited to the first 6 days, because most tourists stayed less than 6 nights, with an average length of stay of 4.6 nights. Only 3.6% of those surveyed stayed more than 7 nights.

Tourists were also asked for details on the nature of their vacation and certain socioeconomic characteristics that were considered to be probable determinants of spatial behavior (Table 1). First, the length of stay variable was measured by the number of nights spent on Paradise Island. Given an average length of stay of 4.6 nights, the variable was collapsed into two categories: below average or "short" stays (I 4 nights), and above-average or "long" stays (L 5 nights). Second, the relative size and significance of the place of stay was determined by measuring the range of facilities available at each hotel or villa. For a more elaborate explanation of this ranking technique, the reader is referred to Debbage (1988). In its simplest terms, an above average or large hotel had either 300 or more rooms and/or a wide range of support facilities (restaurants, tennis courts, swimming pool, and a beach).

Third, the origin of the tourist was measured based on the Bahamas Ministry of Tourism marketing sales regions. Nearly all the surveyed tourists came from the United States (98 %), and tourists were classified as coming from either an eastern or western state (Table 1). Only 15 of the surveyed respondents came from other countries (e.g., Canada, United Kingdom, France), and because they also traveled substantial distances, they were grouped with tourists from western states. The highly aggregated classification scheme was used in the belief that systematically different forms of spatial behavior will only occur, in part, when the distances traveled to reach a destination are substantial ly different. The spatial behavior of those surveyed tended to appear more idiosyncratic when various disaggregated classification schemes were used. Finally, other variables measuring age, education, and income were collapsed into a smaller number of categories based on an analysis of the observed frequencies, while still other variables measured relatively discrete phenomenon (familiarity, mobility, occupation, travel arrangements).

Measuring IntraDestination Eavel Pattxms

For tourists staying on Paradise Island, one of the spatial implications of Plog's generalized model is that an allocentric tourist personality may be more likely to visit attractions located off Paradise Island in the city of Nassau, New Providence Island, and/or other nearby islands. A measure of trip mobility is, therefore, required that effectively discriminates between those tourists who remain on Paradise Island for much of their stay from the tourist who chooses to explore a significant portion of the tourist system outside Paradise Island. A standardized measure of trip mobility was developed which addressed these theoretical prerequisites. It can be algebraically expressed in the following way:

Where:

$$TM' = (N_i + D_i) + (N_{ix} + D_{ix}) + T_{ix} \quad (1)$$

TM_i = the trip mobility score for the ith tourist

N_i = the total number of trips by the ith tourist

D_i = the total number of different attractions visited by the ith tourist

N_{ix} = the total number of trips by the ith tourist to attractions outside Paradise Island

D_{ix} = the total number of different attractions visited by the ith tourist outside Paradise Island

T_{ix} = the number of days after arrival before the ith tourist first visited an attraction off Paradise Island

x = all attractions located off Paradise Island

By standardizing N_i, D_i, N_{ix}, D_{ix}, and T_{ix}, it is possible to sum the different variable values to a meaningful measure of overall trip mobility for the *i*th tourist. Tourists who are more active and explore a wide variety of sites will tend to have higher standardized mobility scores than those who remain close to the place of stay. To quantify, the spatial and temporal behavior of each tourist in this way provides the researcher with a powerful summary statistic that can be analyzed further.

Furthermore, although it is possible to appear highly mobile without leaving Paradise Island, such a scenario is unlikely. In part, this is because of the limited range of alternatives on Paradise Island, but it is due also to the implicit weighting of the trip mobility equation in favor of those leaving the island during their stay. The equation (1) measures the number of trips (N_i, NJ and the number of different attractions visited per tourist (D_i, D_{ix}) both on and off Paradise Island. Therefore, the trip mobility equation is by definition highly interrelated. For ex ample, if a tourist frequented several different attractions located outside the Paradise Island resort complex, then the trip is counted in all of the variables measuring trip mobility. However, to capture the spatially constrained travel behavior of the psychocentric, tourists who made repeated trips to the same attraction located in Nassau or New Providence Island (Figure 2) were not included in the D_i, D_{ix}, or T, variables after the first visit had been completed. Furthermore, only tourists who visited a large number of different sites off Paradise Island scored highly in D_{ix}. Last, tourists who were more adventurous and visited several different attractions on Paradise Island, but did not leave the resort island, only scored in the N, and D, variables. For these reasons, the trip mobility equation worked well in distinguishing between the spatial behavior of tourists who explored a wide geographic area from those tourists who remained on Paradise Island throughout much of their stay.

The temporal dimension is incorporated into the analysis by indicating how many days passed before an individual first visited an attraction off Paradise Island ($r_{,,}$). A high score of 6 was allocated to those tourists who first left Paradise Island on the first day, while tourists leaving later scored proportionally lower scores. Those individuals who did not first visit an attraction off Paradise Island until the sixth day scored only 1. Tourists who never left Paradise Island during the first 6 days of their vacation scored 0. The implication for tourists who immediately leave Paradise Island is that they will score more highly on TX than those individuals who elected to remain on Paradise Island during their stay.

A visual inspection of Figure 3 suggests that rather than being bimodal or skewed in distribution, the standardized trip mobility scores are normally distributed. The mean seemed to be a satisfactory measure of central tendency, with a large number of tourists scoring at, or close to, the average trip score. The spatial behavior of tourists staying on Paradise Island seemed to conform to the expectations for a massmarket resort destination. A large number of tourists exhibited broadly similar forms of spatial behavior, in part, due to the homogeneous mass-market appeal of the destination. However, a substantial number of tourists also appeared to be more likely to remain largely within the resort area, while others explored a wider geographic area.

A closer inspection of each individual "recall" diary indicated that tourists with the highest trip scores visited a multitude of attractions some distance from Paradise Island. On the other hand, those tourists with the lowest scores scarcely left the hotel complex. If it is assumed that spatial behavior is an effective surrogate for tourist personality, it appears that the spatial behavior of tourists staying on Paradise Island broadly parallels Plog's normally distributed continuum of tourist personality typologies. The spatial behavior of a large number of tourists seemed to correlate with Plog's midcentric, while a significant number of tourists also appeared to be the spatial equivalent of the psychocentric and allocentric.

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By definition, psychocentrics traveled less than the "average" tourist. However, had a majority of the respondents remained on Paradise Island for much of their stay, the author would have concluded that the destination attracted a preponderance of psychocentrics, even if the trip mobility scores were normally distributed. That many tourists were willing to travel some distance from Paradise Island during their stay is all the more remarkable in the context of the widely held perception that "Paradise Island remains one of the Bahamas' most attractive, self-contained vacation enclaves" (Cheatham and Cheatham 1986: If). It appears that the relationship between mass-market resort destinations and Plog's theoretical classification of tourist personalities is not straightforward. Resort destinations that are theoretically most likely to cater to psychocentrics may be capable of providing a variety of travel experiences suitable to a wider range of tourist personality typologies than was previously believed.

In Plog's research, the assumption was that the greatest differences in tourist personality existed between the psychocentric and allocentric tourist typologies. Therefore, in explaining the fundamentally different forms of spatial behavior among tourists staying on Paradise Island, only the spatial equivalent of the psychocentric and allocentric need be analyzed in detail. However, in Plog's normally distributed continuum of tourist typologies, it is unclear how the psychocentric and allocentric were precisely defined. In the absence of prior empirical testing, it is assumed that each "centric" is equally likely to occur.

A cutoff point of half standard deviation either side of the standardized mean score was chosen to discriminate between each of Plog's tourist typologies. Although partially arbitrary, a sensitivity analysis revealed insignificant changes in the subsequent research findings when a range of different cutoff points were used to define Plog's psychocentric and allocentric. In further explaining the fundamentally different forms of spatial behavior, a linear-logit analysis was performed using the now dichotomous standardized trip mobility score as the dependent variable and the categorically classified factors listed in Table 1 as the independent variables.

Linear-Lo&t Technique

Linear-logit models tend to be the method of choice when an a priori distinction is made between the response variable and the explanatory variables (Wrigley 1985). In the simple case of a dichotomous response variable, the basic form of the linear-logit model is:

$$\log_e \frac{P_{1/g}}{P_{2/g}} = X'_g \beta$$

Where,

$\log_e \dfrac{P_{1/g}}{P_{2/g}}$ = the log odds probability of the first response category (P_1) occuring for a particular subpopulation (g),

x'_g = the row vector of explanatory variable values for a sub-population (g), and

β = a column vector of parameters.

Each subpopulation (g) is defined on the basis of the cross-classification of the categorical explanatory variables, and the parameters were fitted using the maximum likelihood method (ML). Although weighted least squares (WLS) estimation is sometimes preferred over ML, the WLS assumes sufficiently large subpopulations to justify the approximation of the unknown probability values (P,,,, Z'& by the actually observed proportions cf,,<, &,) (Wrigley 1985). However, as the number of explanatory variables increases, the size of each subpopulation will tend to decline. Therefore, to avoid problems with small sample size, and to allow a full testing of all the potential explanatory variables listed in Table 1, ML was chosen over WLS as the estimation technique.

Models were fitted using the categorical data modeling procedure in Statistical Analysis System's (1985) Version 5 that is similar in capabilities to the GENCAT program by Landis, Stanish, Freeman, and Koch (1976). SAS calculates the ML estimates using the Newton-Ralphson method. The selection of variables was largely based on the screening process devised by Higgins and Koch (1977). The first explanatory variable to be included was the one with the largest chi square in relationship to the response variable. Other explanatory variables are then selected as members of the subset by applying similar selection rules. Only the main effect parameters are considered because of the limited covariance between the selected independent variables.

Based on a chi-square goodness-of-fit test, one can fit a dichotomous linear-logit model that relates the odds of expressing psychocentric spatial behavior to those cate,gorical explanatory variables that were significant at the 1% level of significance (Table 2). The model has the form:

$$\log_e \frac{f_{1/g}}{f_{2/g}} = -0.94 + 1.01X_{g2} - 0.54X_{g3} + 0.49X_{g4} + 0.33X_{g5} \quad (3)$$

$$\phantom{\log_e \frac{f_{1/g}}{f_{2/g}} = } (0.18) \quad (0.11) \quad\quad (0.14) \quad\quad (0.15) \quad\quad (0.12)$$

Where,

X_{g2} = Nights$_g$ = 1 whenever individuals in subgroup g were on a short stay, $-$ 1 on a long stay,

X_{g3} = Mobility$_g$ = 1 whenever individuals in subgroup g rented transportation, $-$ 1 when not renting,

X_{g4} = Origin$_g$ = 1 whenever individuals in subgroup g were from the eastern United States, $-$ 1 when elsewhere,

X_{g5} = Hotel$_g$ = 1 whenever individuals in subgroup g were staying in large hotels, $-$ 1 for small hotels.

The estimated standard error for each parameter is in parentheses. The explanatory variables not included in the model failed to meet the 5% level of significance criteria when using chi square as a termination statistic.

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The value of the constant term (-0.94) can be taken to represent an estimate of the overall or grand mean of the log odds of expressing a preference for psychocentric spatial behavior, where the overall mean is computed across all 16 subgroups (Table 3). The remaining parameter estimates for the model have signs and/or differential effects that conform with the hypothetical expectations about length of stay, mobility, origin, and the place of stay of the ith tourist. The xX2 parameter estimate represents the differential effect of length of stay on the overall mean log odds of expressing a preference for spatially constrained behavior. The reported value (1.0 1) is the differential effect of a below average length of stay, and its negative (- 1 .Ol) is the differential effect of an above average length of stay. Similar reasoning can be applied to the other explanatory variables. In general, the odds of expressing psychocentric spatial behavior increase if individuals stay for less than 4 nights, originate from the eastern United States, and

reside in a larger hotel. The xs3 mobility parameter estimate has the expected negative sign, indicating that tourists who rent a car, scooter, or bicycle are less likely to remain on Paradise Island throughout their stay. Conversely, the odds of visiting attractions off Paradise Island increase if an individual stays for an above average length of time, rented some form of transportation, originates from some distant location, and stayed in a smaller hotel or villa.

The explanatory accuracy of the model is estimated by measuring how many tourists were correctly classified as being spatially equivalent to the psychocentric and allocentric. The model accurately classified 174 of the 225 "psychocentrics,' and 164 of the 229 "allocentrics." Therefore, the model correctly classified 74.5% (338) of the sample. Only 65 "psychocentrics" and 51 "allocentrics" were misclassified, which suggested that the sample was not subject to systematic error.

Analysis of IntraDestination Travel Patterns

The temporal constraint had the most profound impact on the travel behavior of the tourist and was the first variable to be selected in Higgins and Koch's (1977) screening process. A disproportionate number of "allocentric" tourists stayed in accommodation on Paradise Island for an above average number of nights (Table 3). Tourists staying less than 5 nights may also be "allocentric" and explore more distant parts of the tourist system, but are unlikely to do so on a large scale. Tourists staying for more than 4 nights tended to be more mobile and inquisitive, in part, because more time is available to visit the less accessible tourist attractions. Significantly, regardless of the personal characteristics of the individual, the temporal constraint plays a fundamental role in dictating what a person will (and will not) do while visiting the Bahamas. The self-contained nature of the Paradise Island resort destination plays less of a role in constraining intradestination travel patterns when tourists stay in the resort complex for an above average number of nights.

The level of individual mobility is obviously critical to the variety and ease of exploration of the island. Tourists renting some form of transportation (car, scooter, bicycle) have high mobility levels and are, in part, explicitly expressing an intent to travel. It is, therefore, not surprising that a proportionately greater number of "allocentric" tourists rented some form of transportation during their stay (Table 3). However, a significant number of "allocentrics" did not rent any form of transportation, although this did not preclude numerous trips to attractions located off Paradise Island. In part, this is explained by the availability of taxis, sightseeing tours, and cruise tours for tourists interested in exploring a greater geographic area. From a tourism planning perspective, it appeared that appropriately located transportation facilities can assist in influencing the travel behavior of tourists in resort areas. To do so may encourage a greater geographical spread of visitor expenditures throughout the Bahamian economy. However, caution must be exercised in terms of the cause-effect relationships, because many tourists may not alter their behavior under any circumstances.

The distance traveled to reach a resort destination is, in part, determined by length of stay. For example, the further someone has to travel to reach the Bahamas, the longer they tend to stay (Bahamas Ministry of Tourism 1981). Because tourists staying an above average number of nights on Paradise Island are more likely to be "allocentric," it suggests that tourists traveling from more distant origins should also demonstrate allocentric spatial behavior. Although these hypotheses were supported in this study, the interaction effect between length of stay and the origin of the tourist did not prove to be significant at the 5% level when included in the model statement. It may be that the origin of the tourist can provide additional insight when explaining travel behavior in a resort destination. Tourists from the western United States and other countries may tend to be "allocentric," in part because they perceive the Bahamas as more exotic than those residing on the east coast of the United States. Indeed, Plog (1973) argued that the more distant exotic destinations tend to attract the self-confident, curious, and adventurous. It is, therefore, possible that tourists from the eastern United States that are spatially psychocentric may become "allocentric" when visiting more distant destinations such as Fiji. The conclusion is that geographic distance between origin and destination can act as a surrogate variable in explaining previously intangible cultural and psychological differences among individuals.

Where the tourist stays plays a key role in explaining how much he or she "sees" of the host destination. Tourists who stayed in the smaller hotels and villas are far more likely to be "allocentric" than are those tourists who stayed at the larger hotels (Table 3). Tourists staying in the larger, more self-contained hotels visit fewer sites, in part because of the easily accessible facilities nearby. Conversely, the lack of facilities at the smaller hotels may encourage the "allocentric" to explore the broader tourist system. However, "allocentrics" are probably more adventurous and inquisitive out of preference as well as necessity. In fact, their willingness to stay in the smaller hotels and villas may be a reasonable surrogate for those who wish to "know" the host area better and/or are comfortable in more traditional rooms.

CONCLUSIONS

While this paper by no means explains fully why self-contained, mass-market resort destinations do not always induce spatially confined tourist activity patterns, it does point out several interesting differences in the spatial behavior of tourists. Some tourists elected to remain on Paradise Island for much of their stay. However, a substantial group of tourists also seemed to be very adventurous and more likely to leave Paradise Island in order to visit more distant attractions. It seems probable that resort destinations in the Bahamas and the Caribbean that are relatively familiar to U.S. tourists may be capable of attracting a more spatially sophisticated clientele than was previously believed.

More importantly, the major determinants of the spatial behavior of tourists staying in accommodation on Paradise Island were the temporal constraint and the spatial structure of the resort environment. Factors such as length of stay, mobility levels, origin of the tourist, and place of stay most effectively discriminated between psychocentric spatial behavior and allocentric

spatial behavior. Some of the more traditional explanations of spatial behavior did not seem as applicable in this case study. For example, factors that were not significant included the socioeconomic characteristics of the individual (income, education, age, and occupation), the type of travel arrangement (packaged tour v. independent traveler), familiarity levels (first-time or repeat visitor), and party size. Part of the reasoning for this may be because research in other fields (intraurban commuting patterns, consumer shopping behavior, and residential location decisions) may not be directly transferrabie to tourist behavior: "The tourist is a behavioral caste and thus needs special considerations" (Cooper 198 1:360).

More research is required in other resort destination settings, and for other forms of tourism, before any definitive statements can be made about the spatial behavior of tourists. For example, tourists travel for different reasons on different occasions, and an allocentric traveling to the Bahamas on an annual vacation may also visit a psychocentric destination on a weekend trip at another time of the year. Moreover, alternative definitions of the psychocentric and allocentric tourist typologies should be subjected to additional empirical testing. Still, the findings are noteworthy enough to encourage other investigators to investigate in more detail the ways in which tourists explore resort destinations. The need for more intradestination travel research is important in order to understand how tourists act in resort destinations and to make the most efficient use of tourism resources and facilities

within a resort area.

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