Pergamon

Annals of Tourism Research, Vol. 29, No. 2, pp. 358–383, 2002
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Printed in Great Britain
0160-7383/02/$22.00

www.elsevier.com/locate/atoures

PII: S0160-7383(01)00037-8

TOURIST ROLES
Needs and the Lifecourse

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Abstract: This study investigated the relationship between psychological needs and tourist role preference patterns for men and women over the adult lifecourse. A purposive sample of New England (USA) residents ranging in age from 17 to 91 years was surveyed. Three trends in tourist role preference over the lifecourse were observed: roles that decrease in preference, roles that increase in preference, and roles that demonstrate variability. Time series analysis revealed that roles engaged in while on vacation are a function of a complex interplay of satisfied and unsatisfied psychological needs which assert themselves at different stages in the adult lifecourse. **Keywords:** tourist roles, lifecourse, psychological needs, time series analysis, gender. © 2002 Elsevier Science Ltd. All rights reserved.

Résumé: Rôles touristiques, besoins et parcours de vie. Cette étude a investigué le rapport entre les besoins psychologiques et les préférences de rôle touristique des hommes et des femmes en fonction du parcours de vie. Un échantillonnage empirique de résidents de la Nouvelle Angleterre (USA) âgés de 17 à 91 ans a participé à un sondage. Trois types de préférence de rôle touristique en fonction du parcours de vie ont été repérés: des rôles qui diminuent en préférence, des rôles qui augmentent en préférence et des rôles qui varient. Une analyse de série temporelle a révélé que les rôles adoptés par des touristes pendant leurs vacances sont en fonction d'une interaction complexe des besoins psychologiques satisfaits et non-satisfaits qui se manifestent aux différentes étapes du parcours de vie de personnes adultes. **Mots-clés:** rôles touristiques, parcours de vie, besoins psychologique, analyse de série temporelle, sexe. © 2002 Elsevier Science Ltd. All rights reserved.

INTRODUCTION

The second half of the 20th century witnessed a substantial growth in the tourism industry. With technological advances in transportation and increased standards of living in the developed world, traveling for pleasure has become an accepted and even necessary part of life. Initially, beach tourism, or tours of well-known sights were the most common ways to spend a vacation. However, as tourists became more sophisticated, the industry responded by diversifying its product and,

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in the 90s, tourism became a highly specialized commodity. Thus, such specialized products as ecotourism, heritage tourism, sport tourism and adventure tourism, among others, emerged. Nonetheless, despite the fact that the industry was rather slow in recognizing and responding to the existence and diversities of touristic demand, it has long been known among academics that tourists engage in a variety of behaviors or tourist roles, and their needs, wants, and expectations vary considerably (Cohen 1972, 1979; Hamilton-Smith 1987; Jiang, Havitz and O'Brien 2000; Mo, Howard and Havitz 1993; Packer 1974; Pearce 1982, 1985; Plog 1974; Redfoot 1984; Smith 1989; Yiannakis and Gibson 1992).

But why do individuals choose to enact such diverse forms of behavior while on vacation? It is clear, as the existing literature suggests, that there is nothing capricious or trivial about such vacation activity. This behavior demonstrates stability and continuity over the lifecourse and is related to specific demographic and background characteristics such as lifestage, gender, education, income, and marital status (Madrigal, Havitz and Howard 1992; McGehee, Loker-Murphy and Uysal 1996; Perreault, Darden and Darden 1977; Ryan 1995a; Shoemaker 2000). According to Cohen and others (Dann 1977, 1981; Iso-Ahola 1983; Ryan and Glendon 1998; Yiannakis and Gibson 1992), tourist roles may also serve as vehicles through which vacationers seek to satisfy unsatisfied (deficit) and growth needs (Yiannakis, Gibson and Murdy 2000).

The proposition that tourism provides individuals with opportunities to satisfy a variety of psychological needs is not new. However, only since the 70s have researchers begun to amass a body of knowledge that helps link touristic behavior with psychological needs. Wagner (1977) in a study of tourists in Gambia, and Lett (1983) in a study of Caribbean charter yacht tourism, found that vacations provide individuals with opportunities to satisfy needs which constraints back home leave unsatisfied. Gray (1970) postulated that tourists are motivated either by "wanderlust" or "sunlust." Crompton (1979) reported seven sociopsychological motives, including escape and relaxation, and two cultural motives as being pertinent to destination choices. In 1985, Wahlers and Etzel, in order to understand individual differences in decision making adopted Berlyne's (1960) proposition that individuals choose environments where they function at their optimal level of stimulation. Dann (1981) noted the difference between sociopsychological motives (or push factors) and the attributes of a destination (or pull factors) in shaping choices. McGehee, Loker-Murphy and Uysal (1996) investigated the differences in motivations between men and women. They found that the latter were more likely to be motivated by culture, opportunities for family bonding, and prestige, while men placed more importance on sports and adventure. Psychologists, such as Murray (1938) and Maslow (1943), have long postulated that behavior is a function of needs. Their work (among others) has provided the theoretical foundation for studies that have investigated the possible relationship between leisure (and tourism) and need satisfac-

tion (Lounsbury and Polik 1992; Mills 1985; Romsa, Bondy and Blenman 1985; Ryan and Glendon 1998; Thomas and Butts 1998).

Pearce's (1988, 1996) Travel Career Ladder is also grounded in Malsow's work. His model suggests that choice of destination and tourist roles may be influenced by previous tourism experience. Pearce hypothesized that more experienced tourists seek to satisfy higher order needs such as affiliation and esteem, while less experienced ones are more likely to be occupied with lower order needs such as food and safety. Moreover, their choices are likely to reflect such needs. Ryan (1998), evaluating the concept of travel career, noted that the value of this model was its recognition of a developmental progression in motivation based on past tourism experiences and opportunity related to behavior changes over time. However, Kim, Pearce, Morrison and O'Leary (1996) found that the relationship between age and experience did not seem to support the concept of the Travel Career Ladder. Perhaps the relationship between lifestage, motivation, and preference for certain types of tourism mediates the idea of travel career more than previously thought. Indeed, Ryan (1998), in a study of 997 British holidaymakers found that age seems to be an influential variable in explaining the relationship between motivation, past experience, and choice of holiday. This finding supports Pearce's (1993) suggestion that motivational theory should be conceptualized as a dynamic process so as to better account for individual changes across the lifespan. It may well be that lifestage is an important variable underlying the concept of the travel career. In fact, Anderson and Littrell (1995, 1996), using Levinson's theory to examine the tourism patterns and souvenir purchases of female tourists, found that the more experienced ones were more knowledgeable about different geographical locations and cultures, and lifestage was influential in shaping their tourism style. Thus, the purpose of this study was to investigate the relationship between psychological needs and tourist role preference patterns for men and women over the adult lifecourse.

TOURISM AND THE LIFECOURSE

In leisure studies the relationship between leisure, the lifecourse, and the family lifecycle is well established (Kelly 1982; Kleiber and Kelly 1980; Parker 1976; Rapoport and Rapoport 1975). In various studies there have been references to the influence of lifestage or the family lifecycle on tourism choice (Bartos 1982; Cohen 1973, 1984; Cosenza and Davis 1981; Crompton 1981; Graburn 1989; Morin 1984; Plog 1972; Riley 1988; Romsa and Blenman 1989), but until recently, systematic study of this relationship has been lacking. Some authors have applied the concept of the product lifecycle to destinations (Butler 1980; Getz 1992; Plog 1974) and found that different tourist types are attracted to such places at different stages in the destination's product development. While the findings may be relevant to a comprehensive understanding of factors associated with destinations, they should not be confused with research employing lifecourse developmental theories that help explain touristic motivation and behavior.

The former stress the importance of pull factors associated with a destination's product lifestage while the latter focus on those push factors that motivate tourists at different stages in their lifecourse.

Several investigators (Bojanic 1992; Bojanic and Warnick 1995; Hill, McDonald and Uysal 1990; Kerstetter and Gitelson 1988; Fodness 1992; Lawson 1991; Oppermann 1995a, 1995b, 1995c; Ryan 1995b) have examined the relationship between tourism choices and the family lifecycle. Lawson (1991) applied the concept of the modernized family lifecycle to an investigation of international tourists to New Zealand. He found that their behavior is shaped across eight stages of the family lifecycle by the amount of discretionary income available during the different stages, the presence and ages of children, and length of vacation time. Similarly, Bojanic (1992) used a modernized family lifecycle model to examine a sample of 2,000 Americans who had visited Europe within a three year period. Consistent with Lawson's findings, Bojanic reported that vacation activities, presence and age of children, and discretionary income are influential in shaping vacation style. Likewise, using Beard and Ragheb's (1983) Leisure Motivation Scale and a family lifecycle model, Ryan (1995b) found that lifestage consistently emerged as an important predictor of choices.

All these studies are cross-sectional in nature. While it is accepted that cross sectional data may be used to approximate the patterns of the lifecourse and family lifecycle (Babbie 1995), there are others who argue that such designs help explain age differences but not changes resulting from aging. Further, they argue that cohort effects and sociohistorical time are not accounted for (Freysinger 1999). Oppermann (1995a, 1995b and 1995c) addressed many of these issues in a longitudinal study with German tourists. His findings suggest the existence of similar patterns across nine stages of the family lifecycle, as noted by Lawson and Bojanic. Discretionary income and the presence and age of children were used to explain tourist style. However, a cohort analysis of the data revealed that there may be generational differences in choices, suggesting that younger people may be more experienced tourists at an earlier age, than in previous generations. Thus, while there appear to be some cohort differences in vacation choice, lifestage appears to be a more powerful predictor. This finding is further supported by Pennington-Gray (1999) who observed that generation alone was not a significant predictor of tourist behavior.

The application of lifecycle, and its modernized models has generated some useful research to date. However, the diversity of family forms, from the traditional nuclear, to single parent, to families of remarriage, and alternate lifestyle marriages raises questions of both conceptual and methodological nature and makes comparative analyses and data interpretation problematic. Instead, by focusing on individual psychological needs and life contexts, the adoption of an individual lifecourse model may help circumvent many of the issues and problems associated with using family lifecycle models (Levinson, Darrow, Klein, Levinson and McKee 1978; Levinson 1996).

Consistent with individual lifecourse theory, Yiannakis and Gibson (1988), Gibson (1989, 1994), and Yiannakis, Gibson and Murdy (2000)

employed Levinson's model of the adult lifecourse to investigate the relationship between tourist role preference, needs, social class and gender, and lifestage. Their findings suggest a clear link providing further evidence in support of the interplay among these variables and lifecourse development. Levinson's model appears to help tie together the evolutionary nature of tourist role preference and the psychological needs that underlie such development.

Theoretical Framework

Levinson et al (1978) and Levinson (1996) suggest that the lifecourse is characterized by four overlapping eras: childhood and adolescence (0–22 years); early adulthood (17–45); middle adulthood (40–65); and late adulthood (over 60). These eras form the macro-structure of the lifecourse. Each era lasts approximately 25 years and provides the framework within which a series of developmental periods occur.

Central to Levinson's conceptualization of the adult lifecourse is the idea of the individual life structure, or "the underlying pattern or design of a person's life at a given time" (Levinson et al 1978:41). To understand the life structure, the author suggests that three perspectives must be examined collectively: the sociocultural world, the self, and the individual's participation in his/her external world. Levinson suggests that the life structure evolves through a relatively stable sequence of alternating periods of structure-building and structure-changing. He identified ten of these developmental periods and proposed that these comprise the micro-structure of the lifecourse. These periods are the early adult transition (17–22 years), entering the adult world (22–28), the age thirty transition (28–33), settling down and becoming one's own person (33–40), the mid-life transition (40–45), entering middle adulthood (45–50), the age fifty transition (50–55), culmination of middle adulthood (55–60), the late adult transition (60–65), and the entry life structure for late adulthood (65 plus). Levinson also proposed that an additional period, late–late adulthood, may begin around 80 years of age. Levinson (1996) noted that the sequence of developmental periods repeats itself throughout the lifespan. Each era starts with a cross-era transition which then moves into an entry life structure. A mid-era transition allows for modifications which result in a culminating life structure, before the process starts over with another cross-era transition. Structure building periods (such as early and culminating life structures) generally last six or seven years. A transition, or structure-changing period is about five years in length.

Each individual appears to encounter the start and culmination of the different periods within a narrowly specified age range. The developmental tasks associated with each period are also relatively universal in their occurrence. However, the actual character of an individual's life structure is influenced by such institutions and processes as occupation, marriage and family, interpersonal relations, and psychological needs, among others. Thus, when investigating tourist role preference, attention should be paid to a variety of social structures and processes,

including psychological needs and lifecourse stage. For example, it is well documented that gender role expectations impact all aspects of men's and women's lives, from career choice (Blau 1984), and family responsibilities (Horna 1989), to opportunities for, and choice of, leisure activities (Deem 1986; Green, Hebron and Woodward 1987; Henderson and Bialeschki 1991; Shaw 1992).

Dann, Nash and Pearce (1988:25) were among the first to deplore the ahistorical nature of much of the research in the fields of leisure and tourism. To rectify this they suggested that time series analysis "could be an exciting direction of future research". In response, Yiannakis, Gibson and Murdy (2000) employed a model, in a related exploratory project, that combined lifestage, gender, tourist roles, and psychological needs in a time series ARIMA model (Autoregressive Integrated Moving Average) involving curve fitting. The findings of this exploratory analysis with three tourist roles yielded promising results and serve as the basis for the time series analysis models reported in this paper.

Study Methods

The data were collected in the spring and summer of 1993. Based on our previous findings regarding the influence of lifestage and gender on tourist role preference (Gibson 1989, 1994; Gibson and Yiannakis 1993; Yiannakis and Gibson 1988, 1992), the sample was stratified on the basis of these criteria. To ensure the collection of an adequate number of cases for both gender and age, a variety of clubs and organizations in the State of Connecticut (USA) were contacted. A total of 36 organizations agreed to participate. Additional questionnaires were also completed by clients at a travel agency, students at the University of Connecticut, and by private sector employees in a number of companies throughout New England (USA). In each case, standardized methods were employed in administering the questionnaires.

The Sample. The data consist of a purposive stratified sample of 1,277 New England (USA) residents. Participants range in age from 17 to 91 years, with a mean age of 46.3 years (SD 18.4). The sample is comprised of 491 males and 786 females. Over half are currently married (55.5%), one fourth never married (24.5%), with 14% students, 44.7% employed full-time, and 25.5% retired. Regarding education level, participants range from those who have never graduated high school (4.1%) to those who hold advanced degrees (4.9%). The mean annual family income is $45,000, although the modal income level is $70,000 and above.

The Instrument. The Tourist Role Preference Scale developed by Yiannakis (1986) and Yiannakis and Gibson (1992), and modified by Gibson (1994) is a self administered questionnaire. It is comprised of three sections. The first consists of 30 items measuring tourist role preference. Each tourist role is measured by two items to which respondents are asked to indicate, using a five-point Likert-type scale, the

degree to which a statement best describes their actual behaviors while on vacation. The scale ranges from 5 (always like me) to 1 (never like me). Cronbach's Alpha for the tourist role scale is .80. The procedures for establishing the reliability and validity of the Yiannakis Tourist Role Preference Scale are reported in detail in Yiannakis and Gibson (1992). The second part of the instrument measures satisfaction of psychological needs. A list of 22 major needs considered to be relevant to this study was developed by the authors based on prior works from the existing literature. Respondents were asked to indicate the degree to which each need was satisfied at this point in their life, using a five-point Likert-type scale (1 = unsatisfied and 5 = satisfied). Cronbach's Alpha for the needs scale is .91. Initial construct validity was established by correlating each item in the scale with a computed Total Need Satisfaction Score. Results yielded correlations ranging from .47 to .68 for all items. The scale was also tested for criterion validity by comparing trichotomized computed total need satisfaction scores (high, moderate, and low need satisfaction) with a trichotomized independent measure of life satisfaction (high, moderate, and low life satisfaction) in a one-way analysis of variance (with *post hoc* Schefée tests). All group means were statistically different from each other at the .01 level of significance. As expected, individuals with higher need satisfaction scores were also more satisfied with their life. The third part of the questionnaire measures demographic characteristics such as age, gender, marital status, and education level.

Data Analysis. Principal components analysis with quartimax rotation was used to verify the construct validity of the Tourist Role Preference Scale for this sample. A seven factor solution was obtained which accounted for 56.3% of the total variance. After further examination of the role inter-item correlation matrix, a decision was made to treat the four items measuring the Escapist and the Independent Mass Tourist as separate roles. This new finding suggests that there may exist two subcategories of the Escapist and the Independent Mass Tourist. One form of escapism involves getting away from the routine and stresses of everyday life (but not necessarily away from people) mostly in search of a change of scene (Escapist I). The second form suggests a search for solitude in places that are quiet and peaceful, such as a deserted beach or a cabin in the hills (Escapist II). The Independent Mass Tourist I enjoys visiting regular attractions but plans the whole vacation with little assistance or reliance on others. The Independent Mass Tourist II also enjoys visiting regular attractions but their vacations are characterized mostly by spontaneity and less planning. A complete listing of the tourist role typology is reported in Table 1.

The preference patterns among men and women for each tourist role over the lifecourse were generated through trivariate cross-tabulations. Tourist role preference was dichotomized into high or low preference with a cut point of eight indicating high preference (based on an aggregate score of 10 points). Lifecourse stage was determined by categorizing age into 10 groups in accordance with Levinson's model. These are ages 17–22, 23–27, 28–33, 34–39, 40–45, 46–49, 50–

Table 1. A Typology of Tourist Roles (N=1241–1272)[a]

1:	Sun Lover (SNL) 33.8%[b] Interested in relaxing and sunbathing in warm places with lots of sun, sand and ocean
2:	Action Seeker (ACT) 7% Mostly interested in partying, going to night clubs and meeting people for uncomplicated romantic experiences
3:	Anthropologist (ANT) 31.3% Mostly interested in meeting the local people, trying the food and speaking the language
4:	Archaeologist (ARC) 24.9% Primarily interested in archaeological sites and ruins; enjoys studying history of ancient civilizations
5:	Organized Mass Tourist (OMT) 13.8% Mostly interested in organized vacations, packaged tours, taking pictures/buying lots of souvenirs
6:	Thrill Seeker (TRS) 6.2% Interested in risky, exhilarating activities which provide emotional highs for the participant
7:	Explorer (EXP) 9.6% Prefers adventure travel, exploring out of the way places and enjoys challenge in getting there
8:	Jetsetter (JST) 1.8% Vacations in elite, world class resorts, goes to exclusive night clubs, and socializes with celebrities
9:	Seeker (SKR) 6.3% Seeker of spiritual and/or personal knowledge to better understand self and meaning of life
10:	(a) Independent Mass Tourist I (IMT-I) 16.9% Visits regular tourist attractions but avoids packaged vacations and organized tours (b) Independent Mass Tourist II (IMT=II) 16.5% Plans own destination and hotel reservations and often plays it by ear (spontaneous)
11:	High Class Tourist (HCT) 12.6% Travels first class, stays in the best hotels, goes to shows and enjoys fine dining
12:	Drifter (DTR) 0.9% Drifts from place to place living a hippie-style existence
13:	(a) Escapist I (ESC-I) 20.9% Enjoys taking it easy away from the stresses and pressures of home environment (b) Escapist II (ESC-II) 9% Gets away from it all by escaping to peaceful, deserted or out of the way places
14:	Active Sport Tourist (AST) 20% Primary emphasis while on vacation is to remain active engaging in favorite sports
15:	Educational Tourist (EDT) 6.7% Participates in planned study tours and seminars to acquire new skills and knowledge.

[a] Since most tourists play multiple roles above figures exceed 100%.
[b] Read as 33.8% of all tourists engage in this role "Frequently" or "Always".

55, 56–59, 60–65, and 66 and over. Unlike Levinson's model, however, age overlaps were avoided to ensure the mutual exclusivity of the lifestage variable. Each tourist role was cross-tabulated in turn by the variables lifestage and gender. These analyses yielded 2×10 tables showing percent preference for a particular role by gender, over the 10 lifestages.

To investigate the possible influence of needs on tourist role preference across each of the ten lifecourse stages a particular type of time

series analysis called ARIMA (autoregressive integrated moving average) was employed. ARIMA was initially developed by British statisticians Box and Jenkins in 1976. Time series analysis is based on a chronological set of observations which are generated in sequential form. An important feature of a time series is that data are ordered with respect to some time frame and successive observations are expected to be serially correlated. Observations in a series which are totally independent of each other, as for example with lottery drawings, do not make good candidates for time series analysis because the ability to fit a curve and then forecast is based on the assumption that the past behavior of a variable can be used to predict its future. Further, Kachigan notes that

> the same techniques can be applied to *spatial* series; for example, measurements made along a city street … an earth probe … a genetic DNA strand, etc., where such series are subdivided in analytical subunits … analogous to time periods (Kachigan 1986:423).

Thus, cross sectional data lend themselves to such types of analyses as well because the goal of time series analysis is to determine how previous measurements in a series forecast future ones. Regardless of whether time or spatial data are used, if the data points in a distribution are serially correlated, they are then a good candidate for time series analysis.

The most general ARIMA model involves three processes. In an autoregressive model each value in a series is a linear function of the preceding value, or values. An integrated series is one in which mean and variance remain stable over time. Such a series is said to be stationary. The third component in a time series is the moving average. This denotes the effect of error values (the difference between predicted and actual scores in a time series) on a model's ability to predict future values in that series.

Time series analysis also permits the inclusion of independent variables which themselves also form a time series. In curve fitting, a specific application of time series analysis, an attempt is made to generate a distribution based on the ability of the independent variables to best fit the distribution of the dependent variable. In this study, the dependent variables are the tourist role distributions over the lifecourse and the independent variables consist of psychological needs. The objective of this procedure is to obtain the best goodness of fit between the two distributions. A high goodness of fit suggests that the two distributions are highly related and, in most cases, the distribution based on the joint contribution of all the independent variables may be used to forecast future values of the distribution of the dependent variable. Finally, such serially correlated distributions may be tested for goodness of fit by examining error values, reduction of log likelihood values and through cross correlation procedures. Cross correlation is a procedure that permits the testing of a relationship between two series of data "at the same time and also with each series leading by one or more lags" (SPSS 1994:49). This method also enables the investigator to

determine whether one distribution is the leading indicator and hence the "driving force" of the other.

As to the relationship between lifestage and psychological needs, Levinson's theory proposes that (assumption 1) the latter are a function of the former. In this study it is suggested that (assumption 2) tourist role preference is a function of psychological needs. To test this relationship assumption 1 must hold true if assumption 2 is to be tested with any degree of confidence. Levinson's theory is based entirely on in-person interviews. His conclusions are derived from interpretive analyses of in-depth reports and the proposed relationship between lifestage and psychological needs has not been tested quantitatively. One exception to this is a study by Iso-Ahola, Jackson and Dunn (1994) who used Levinson's model to investigate starting, ceasing, and replacing leisure behavior over the lifecourse. Their quantitative analysis lends support to the idea of change and stability in lifestages and eras.

Since the theoretical basis of this work is grounded in Levinson's theory, it was clearly necessary to demonstrate, *a priori*, the existence of such a quantitative relationship before addressing the research question for this study. That is, what the relationship between psychological needs and tourist role preference patterns for men and women over the adult lifecourse is. To test the possible relationship between lifestage and psychological needs (assumption 1) three roles were selected for the analysis: the Active Sport Tourist (AST), the Anthropologist (ANT) and the Independent Mass Tourist I (IMT-I). These were analyzed by gender using cross correlation.

Study Findings

The findings, albeit limited by only ten data points (lifestages), yielded cross correlation functions at lag zero that ranged from .752 (IMT-I, Women) to −.662 (AST-Men). The minus sign for AST-Men indicates an inverse relationship between the psychological needs distribution and lifestage. This is as expected, because as individuals age they tend to participate less in sport, in general (McPherson 1984), and in the Active Sport Tourist role in particular. These findings provide tentative support to Levinson's theory that lifestage and psychological needs are indeed interrelated. Further, in the case of male Independent Mass Tourists and Anthropologists, sizable positive lag 1 coefficients (.847 and .799) also suggest that lifestage is a leading indicator, or "cause" of their respective psychological needs distributions. This finding provides initial, tentative quantitative support that needs are a function of lifestage, as suggested by Levinson et al (1978) and Levinson (1996).

The findings indicate that there are three general trends in tourist role preference patterns over the adult lifecourse. Trend 1 is characterized by roles whose preference patterns mostly decrease over the lifecourse. Trend 2 is characterized by roles whose preference patterns mostly increase over the lifecourse, and Trend 3 is characterized roles whose preference patterns demonstrate variability over the lifecourse.

Trend 1: Roles Demonstrating Mostly a Decrease in Preference over the Lifecourse. The Action Seeker, the Active Sport Tourist, the Thrill Seeker, the Explorer, the Drifter, and the Sunlover are roles that demonstrate mostly a decrease in preference over the lifecourse. That is, as people age they are less likely to participate in certain roles while on vacation. For example, Active Sport Tourists are individuals who once on vacation like to engage in their favorite pursuits such as skiing, tennis, golf, fishing, and scuba diving. But over the lifecourse the popularity of this type of vacation declines gradually for both men and women. Until the mid-life transition (40–45), men express more interest in active sport tourism than women, with the former reporting participation levels around 50 to 60% throughout Early Adulthood compared to 30 to 38% among women in the same lifestage. With the onset of Middle Adulthood (46–49), interest in this role declines sharply for males (down to 26.3%), while remaining relatively stable for females (34.7%). This decline in preference for active sport tourism is reversed among men in their early to mid 50s with 37% engaging in this role while on vacation. However, this trend is short-lived among men in their mid 50s to mid 60s, with just over a quarter of men in this age range taking part in sports while on vacation. Women in their early 50s report a decline in preference for this role (down to 19.6%), although preference increases once more until entry into Late Adulthood when the popularity of active sport tourism among women decreases to 21%. This decline in preference for women in Late Adulthood is not, however, matched by a corresponding decrease by males, whose participation remains at 32.8%.

In addition to cross-tabulations, preference for the Active Sport Tourist role was investigated using a modified ARIMA model (differenced AR2 model). The procedure involved fitting the "best curve" possible to the actual pattern of the Active Sport Tourist by using the best predictors from the battery of 22 psychological needs. The results of these procedures, by gender, are reported in Table 2. It is noteworthy that substantial significant autoregressive functions (AR2) for all six time series analyses suggest that future values of the tourist role distributions may be predicted by using up to two previous data points (lags) from these same distributions. The AR2 functions, combined with the contributions of the derived psychological needs distributions generated models that reflect a very high goodness of fit. It is evident from the data that a parsimonious model consisting of five psychological needs generates a distribution that provides an excellent fit with the distribution of the Active Sport Tourist role. The cross-correlation functions (differenced once) between the actual distribution of the Active Sport Tourist and the derived distribution were obtained from a combination of satisfied and unsatisfied psychological needs. Satisfied needs are denoted by a plus sign (+) and unsatisfied ones by a minus sign (−).

For males, the needs "driving" the distribution are *unsatisfied* needs for play (−), sexual needs (−) and home and family (−) in combination with *satisfied* needs for having clear goals (+) and control over their life (+). It appears that the *joint effects* of satisfied and unsatisfied

Table 2. Time Series Analysis for Psychological Needs and Active Sport Tourist

Men:				
Final Parameters:				
Number of residuals	9			
Standard error	.14603999			
Log likelihood	7.6429829			
AIC	.71403428			
SBC	2.2918309			
Analysis of Variance:				
	DF	Adj. Sum of Squares	Residual Variance	
Residuals	1	.05977909	.02132768	
Variables in the Model:				
	B	SEB	*t*-Ratio	Probability
AR1	1.0610216	.05646337	18.79133	.03384646
AR2	−.9942687	.00907284	−109.58737	.00580908
PLAY1	−.1248114	.00770976	−16.18875	.03927492
GOALS1	.3199414	.00465113	68.78786	.00925418
CONTROL1	.2324255	.00658727	35.28401	.01803790
FAM1	−.2280583	.00370140	−61.61410	.01033146
SEXUAL1	−.1592664	.00530076	−30.04597	.02118037
CONSTANT	−3.7727913	.06971882	−54.11439	.01176300
Women:				
Final Parameters:				
Number of residuals	9			
Standard error	.13252425			
Log likelihood	7.7153632			
AIC	.56927358			
SBC	2.1470702			
Analysis of Variance:				
	DF	Adj. Sum of Squares	Residual Variance	
Residuals	1	.07738456	.01756268	
Variables in the Model:				
	B	SEB	*t*-Ratio	Probability
AR1	.6534039	.01051369	62.1479	.01024274
AR2	−.9993311	.00085310	−1171.4068	.00054347
FAM1	.3794622	.01013557	37.4387	.01700030
CONTROL1	−.0870232	.00751420	−11.5812	.05483430
SEXUAL1	−.0952294	.00188981	−50.3910	.01263195
GETAWAY1	.1965387	.00684832	28.6988	.02217381
HEALTH1	−.1351544	.00793739	−17.0276	.03734471
CONSTANT	−2.7246729	.04812231	−56.6197	.01124261

needs eventually serve as push factors in the selection of this tourist role. The results of the time series analysis clearly bear this out. The obtained cross correlation function of $r = .998$ (which reflects several positive and negative lags) between the derived distribution of psychological needs and the actual distribution of the Active Sport Tourist reveals that psychological needs may be a "leading indicator." A moderately large correlation at positive lag 1 of $r = -.508$ suggests that knowledge of psychological needs helps predict tourist role preference one step ahead. This relationship holds up for a total of four positive lags but its magnitude tends to diminish with lag four to $r = -.386$. Three

negative lags are also evident which suggest that it is also possible to predict psychological needs from the distribution of the Active Sport Tourist. However, it is clear that prediction is slightly superior if the derived distribution for needs is used as the independent variable (as the leading indicator).

For females the variables "driving" the needs distribution are need for control (−), sexual needs (−), health (−), need for home and family (+), and the need to get away from it all (+). The model suggests that the selection of the Active Sport Tourist role is a function of the joint effects of *satisfied* needs for home and family, and to get away from it all, combined with *unsatisfied* needs for control over their lives, sexual and health needs. The cross correlation function of $r = .966$ (which also reflects several positive and negative lags) between the two distributions once more indicates that psychological needs may be a "leading indicator" of the Active Sport Tourist. A large correlation at positive lag 1 of $r = -.649$ suggests that knowledge of psychological needs helps predict tourist role preference one step ahead. While this relationship holds up for a total of four positive lags, its magnitude tends to diminish with lag four to $r = .306$. This suggests that predicting ahead one or two lags may be possible with some degree of precision.

Trend 2: Roles Demonstrating Mostly an Increase in Preference over the Lifecourse. The Anthropologist, the Archaeologist, the High Class Tourist, the Educational Tourist, and the Organized Mass Tourist are roles that demonstrate a relative increase in preference over the lifecourse. That is, as people age they are more likely to participate in these roles while on vacation. A detailed discussion of one such role focuses on Anthropologists. They enjoy meeting the local people, sampling the food, and speaking the language. They are interested in the local culture and generally avoid the regular tourist route. Although the role is popular among many tourists of all ages, the data suggest that preference increases with age and peaks in middle adulthood. Further, during the first stages of early adulthood (17–27), more women than men report engaging in the Anthropologist role (males 32.5%; females 48.4%). With the onset of the age thirty transition (28–33) however, preference for this role among men and women converges (males 41.3%; females 43%). For men, this increasing propensity to take anthropologically-oriented vacations continues into the mid to late 30s (males 49.2%) and levels off during the mid-life transition (males 40–45, 47.6%). For women, interest in this type of vacation decreases slightly during the mid to late thirties (41.2%), but increases once more during the mid-life transition (women 40–45, 57.5%). Throughout the 40s, and into the age fifty transition, women's preference for the Anthropologist role increases slightly to 60%, whereas preference for this role among men surpasses the women, with 71.7% of the former between the ages of 50 and 55 vacationing as such. For men in this sample, interest in this role declines sharply in the late 50s (47.8%), only to rise again during the age sixty transition (62%). The end of the transition is marked once more by a fairly large decline in preference to 47.7%. In contrast, preference for the Anthropologist role among women peaks during

the mid to late 50s (81.5%), only to decline again to 50% with the onset of the late adulthood transition. This trend continues, with a slight dip in preference, into late adulthood with 46.2% of the women aged between 66 and 91 engaging in this role while on vacation.

The results of time series analysis, by gender, are reported in Table 3. It is evident from the data that a parsimonious model (differenced AR2 model) consisting of five psychological needs generates a distribution that provides an excellent fit with the distribution of the Anthropologist for both males and females. For men, the input variables generated a distribution whose goodness of fit with the distri-

Table 3. Time Series Analysis for Psychological Needs and Anthropologist

Men:				
Final Parameters:				
Number of residuals	9			
Standard error	.11156803			
Log likelihood	8.1908713			
AIC	−.38174266			
SBC	1.196054			
Analysis of Variance:				
	DF	Adj. Sum of Squares	Residual Variance	
Residuals	1	.08157467	.01244743	
Variables in the Model:				
	B	SEB	*t*-Ratio	Probability
AR1	1.7998736	.00249363	721.7873	.00088200
AR2	−.9997570	.00027222	−3672.5854	.00017334
COMPAN1	−.5138784	.00216886	−236.9353	.00268688
GETAWAY1	−.7767295	.00129575	−599.4441	.00106202
HEALTH1	−.9866335	.00190493	−517.9368	.00122914
STATUS1	.5809525	.00281523	206.3603	.00308497
ROOTS1	.0414833	.00338869	12.2417	.05188904
CONSTANT	3.3282080	.23533844	14.1422	.04494075
Women:				
Final Parameters:				
Number of residuals	9			
Standard error	.28291102			
Log likelihood	.87852382			
AIC	14.242952			
SBC	15.820749			
Analysis of Variance:				
	DF	Adj. Sum of Squares	Residual Variance	
Residuals	1	.35451281	.08003865	
Variables in the Model:				
	B	SEB	*t*-Ratio	Probability
AR1	1.402832	.00828927	169.23459	.00376172
AR2	−.999133	.00109151	−915.37183	.00069548
STIMU11	−.767596	.01939760	−39.57170	.01608433
FINANC1	−1.576064	.01410533	−111.73532	.00569742
GROWTH1	.738179	.01761593	41.90409	.01518942
SAFE1	.928839	.00729352	127.35134	.00499882
ROOTS1	−.272157	.01635972	−16.63581	.03822205
CONSTANT	11.499489	.28655436	40.13022	.01586057

bution of the Anthropologist role yielded a cross correlation of r = .991. For women, the goodness of fit was r = .964.

For men, "driving" the distribution are psychological need for status (+), need to feel connected to one's roots (+), companionship needs (−), need to get away from it all (−), and health and well being (−). The model indicates that the selection of the Anthropologist role is a function of the joint effects of *satisfied* needs for status and to feel connected to one's roots combined with *unsatisfied* needs for companionship, to get away from it all and health and well-being. The large beta weights associated with the need for health and well-being (beta = .986) and the need to get away (beta = .776) suggest that individuals for whom these needs are unsatisfied, in combination with the remainder of the needs in this cluster, are more likely to become Anthropologists.

For women, "driving" the distribution are psychological need for growth and self actualization (+), safety and personal security (+), need for stimulation (−), financial security (−), and the need to feel connected with one's roots (−). The model suggests that for women the selection of the Anthropologist role is a function of the joint effects of *satisfied* growth and safety needs combined with unsatisfied needs for stimulation and excitement, financial security, and to feel connected with their roots. *Unsatisfied* financial security (beta = 1.58), combined with satisfied personal security needs (beta = .93) account for the largest contribution to the model.

The cross correlation function between the distribution obtained from psychological needs and the actual Anthropologist role of r = .964 (for women) is associated with five positive lags. While this is suggestive that needs are the leading indicator in this relationship, the correlation coefficients are small at the different lag points, thus making prediction unreliable. This, however, may be a function of the limited number of data points in the distributions. Future research with more data points should shed light on this question.

Trend 3: Roles Demonstrating Mostly Variable Patterns over the Lifecourse. The Seeker, the Jetsetter, the Independent Mass Tourist I and II and the Escapist I and II are roles that demonstrate a mostly variable pattern over the lifecourse. For example, in general, Independent Mass Tourists (both type I and II) enjoy visiting regular tourist attractions but choose to avoid organized tours. They mostly prefer to do their own planning, need a greater degree of independence, and enjoy setting their own itinerary. Type II Independent Mass Tourists are characterized by the need for spontaneity.

To focus on the Independent Mass Tourist I, during the Early Adult Transition (17–22) women express more interest in this role than men (males 38.2%; females 47%). Among those between the ages of 23 and 27 this pattern is reversed with males reporting a significant increase in preference for this type of vacation (males 62.5%; females 45.3%). However, during the 30s even though there is a gradual increase in preference for this role among both genders, women are slightly more likely to engage in independent mass tourism than men (34–39, males

51.6%; females 52.6%). This pattern continues into the mid life transition (40–45, males 57.1%; females 58.8%). Among individuals between 46 and 49, both men and women demonstrate a peak in preference for this role (males 63.2%; females 65.3%). With the onset of the age fifty transition, interest in the Independent Mass Tourist I role decreases slightly for men (60.9%) and more significantly for women (47.8%). However, among women preference for this role is renewed during the late 50s (55.6%), whereas men report a slight decrease during this period (47.8%). With the onset of the late adulthood transition men continue to maintain their interest in the Independent Mass Tourist I role (48%), whereas women report a decrease in preference (35.6%); a pattern which continues into late adulthood. Further, while men in late adulthood report a lower preference for Independent Mass Tourism than men at the start of their 60s, they are still slightly more likely to engage in this type of behavior while on vacation than their female counterparts (66–91 years, males 35.4%; females 30.2%).

The time series analysis for the Independent Mass Tourist I generated a parsimonious model consisting of five psychological needs. The resulting distribution provides an excellent fit with the distribution of the Independent Mass Tourist I role for both men and women. For the former, the input variables (psychological needs) generated a distribution whose goodness of fit with that of the Independent Mass Tourist I yielded a cross correlation of $r = .971$. For women, the goodness of fit is $r = .993$.

For men, "driving" the distribution are psychological needs for solitude/privacy (−), creativity and self expression (−), financial security (+), love and affection (+), and sexual needs (+). The model suggests that men who become Independent Mass Tourists (Type I) report that their needs for solitude and privacy, creativity and self expression, are not satisfied. However, they report that their sexual needs, financial security, and the need for love and affection are satisfied. The greatest contributors to this model are *unsatisfied* needs for solitude and privacy (beta = −1.37) and creativity and self expression (beta = −.64), and a *satisfied* need for love and affection (beta = .93).

In summary, the data suggest that preference for the Independent Mass Tourist I role for men is a function of the joint effects of unsatisfied needs for solitude and creativity, in combination with satisfied financial, sexual, and love and affection needs. While the cross-correlation function is associated with both positive and negative lags at points three and four, the coefficients at these lags are too small to enable prediction ahead with any degree of accuracy. For women, "driving" the distribution are the need to feel successful (+), status (+), independence (+), creativity (+), and sexual needs (−). The model suggests that women who become Independent Mass Tourists (Type I) report that their needs for status, to feel successful, creative and independent are satisfied. However, they report that their sexual needs are not satisfied. The greatest contributors to the model are *satisfied* needs for success (beta = 1.48) and independence (beta = 1.17). Therefore, the data suggest that preference for the Independent Mass Tourist I role for women is a function of the joint effects of unsatisfied

sexual needs in combination with satisfied success, status, independence and creativity needs. The cross-correlation function of $r = .993$ at lag zero is also associated with both positive and negative lags. Further, the six positive lags evident in the model, and the magnitude of the correlation coefficients (which range from $r = -.411$ to $r = -.274$ at lag six), suggest that psychological needs may be a leading indicator. Thus, predicting ahead for several lags with some degree of accuracy may be possible.

Place of Vacations in Lifecourse

Tourism scholars have long debated the place of vacations, or holidays, in people's lives. Graburn writes of "… those structurally-necessary, ritualized breaks from routine that define and relieve the ordinary" (1989:23). Urry notes that the phrase "I need a holiday" is synonymous with "… the idea that people's physical and mental health will be restored if only they can 'get away' from time to time". Moreover, in modern life "[n]ot to 'go away' is like not possessing a car or a nice house" (Urry 1990:5, 4). However, the different types of vacations individuals select vary widely, and touristic behavior takes many forms and reflects a diversity of styles. Yet an underlying pattern, or order, is clearly evident in these findings. This provides further support to Levinson's contention that there is an implicit order to the adult lifecourse, "… a sequence of seasons through which our lives must pass, each in its own way" (Levinson 1996:4). The results of this investigation suggest that what appear to be individual choices in tourist role preference may in fact be linked to relatively stable and recurring patterns in the evolving adult lifestructure. Further, such choices appear to represent efforts by tourists to address psychological needs which become preeminent as individuals encounter the tasks associated with each lifestage. Interestingly, Cohen advanced a similar hypothesis (1984:377), and the results of our time series analyses provide further support to this contention.

Levinson found that the first stages of early adulthood are characterized by a desire for exploration. As part of the separation process from the family of origin, individuals are presented with more freedom, more choices, and more options. Adventure, experimentation, and the avoidance of strong commitments characterize the transitory nature of life during the 20s. Hence, it is not surprising that the role of the Action Seeker, with its emphasis on a carefree lifestyle free of commitments, is so attractive to individuals in the first stages of adulthood. For those requiring more structure to their vacations, the Active Sport Tourist is a role that combines many of the elements of Early Adulthood without the added risks associated with other roles in this grouping, such as the Drifter, the Thrill Seeker, and the Explorer, that are characterized by excitement, risk, and a general sense of freedom. These attributes are clearly compatible with the tasks of the novice phase of early adulthood which stresses exploration, adventure, experimentation, and a lack of commitment to any one option.

Differences in tourist role preference among young men and women

also suggest that societal expectations regarding the appropriateness of different vacation behaviors may be at work. For example, in early adulthood more women than men become Anthropologists while on vacation. Since this is a people-oriented role, and girls tend to be socialized to be much more relationship-oriented than boys who, for the most part, are taught the values of individualism and self reliance (Gilligan 1982; Lopata 1987), this may partially explain why more females in their 20s are attracted to this type of vacation style than males. Levinson reports that in early adulthood the masculine aspects of the male identity predominate among men. However, this pattern is not maintained through the 30s. With the onset of the age thirty transition (28–33 years), men and women express comparable levels of preference for the Anthropologist role. Indeed, the age thirty transition appears to be a significant turning point in the lives of many people as evidenced by the changes in the patterns of many of the tourist roles in this study.

With the onset of the age thirty transition (28–33 years) there is a sense that life is becoming more serious. The second task of early adulthood, the creation of a niche in the adult world, becomes more of a priority and the behaviors associated with such roles as the Action Seeker and the Thrill Seeker may not be compatible with this developmental phase. Decisions must be made concerning occupation, marriage, and family. While engaged in the process of becoming full members of society, this increasing seriousness of purpose may spill over and find expression in the need to experience other cultures (the Anthropologist), to study the history of ancient civilizations (the Archaeologist), and in the acquisition of new skills (the Educational Tourist). At the same time, many in this lifestage are in the midst of the Establishment Phase of the family lifecourse (Kelly 1982). Consequently, as parents they may feel that it is important to expose their children to a range of educational opportunities while on vacation (Crompton 1981). The roles of Educational Tourist, Anthropologist, and Archaeologist are examples of educationally-oriented vacations, and an increase in the propensity to take this sort of holiday throughout the 30s and 40s is clearly evident in the data.

The role of the Independent Mass Tourist, which remains consistently typical over the lifecourse, also increases slightly in popularity during the 30s and 40s. In terms of the family lifecycle, this may also be a time when children are old enough to take on a touring vacation. Visits to national parks, famous cities, amusement parks, and other sights are popular family vacations which often fall in the realm of the Independent Mass Tourist role. Lawson (1991) characterized family vacations during this lifestage as "busy holiday people" (Full Nest III). In addition to the role of the Independent Mass Tourist I, interest in the Independent Mass Tourist II, and Escapist I and II roles, appears to be relatively consistent over the lifecourse for both men and women, diminishing only slightly with retirement.

As individuals move from their 30s into their 40s they enter the midlife transition (40–45 years). This lifestage is accompanied by a need to achieve a balance between the polarities in one's identity, young

and old, masculine and feminine. Indeed, Levinson suggests that those who successfully complete the tasks of the mid-life transition emerge as individuals who are more mature, have a greater sense of their capabilities, and are no longer preoccupied with personal advancement. For men, this is often a period when they spend more time with their families, although for women this may also be a time when they become more involved in identities outside of the family (Droege 1982). With regard to tourist role preference, the propensity in middle adulthood to engage in such roles as the Archaeologist, the Anthropologist, and the High Class Tourist starts to increase markedly. As part of the period of self evaluation which accompanies the transition into middle adulthood, individuals also become increasingly more aware of their own mortality. As a result, they often become involved in activities designed to leave a legacy for future generations. Levinson suggests that middle adulthood has the potential to be the most creative and gratifying period of the lifecourse. Consequently, individuals fueled by the quest for immortality and creativity may choose intellectually stimulating vacations. Connecting with one's roots, history, and traditions is one aspect of this developmental phase. It is a period in the lifecourse that is characterized by a search for meaning, and for deeper answers to life's as yet unanswered questions. The search for "answers" takes the Anthropologist to other cultures where it is hoped that immersion in the lives and ways of other people may reveal secrets not found in the tourist's home world. The time series analysis suggests that this is particularly true for women whose needs for stimulation, and to feel connected with their roots, are clearly not satisfied.

In late adulthood, with the exception of a renewed interest among men in active sport tourism, (one suspects this probably reflects mostly golf vacations), preference for the Anthropologist, Active Sport Tourist (among women), and Independent Mass Tourist I declines somewhat. While interest in these roles does not disappear all together, other roles such as the Seeker, the Organized Mass Tourist, and the Educational Tourist are favored during late adulthood. Individuals at this stage in the lifecourse face changes in the biological, social, and psychological components of their lives. These changes are often reminders of the aging process, the loss of friends and loved ones, and of their mortality. If life is to continue to remain meaningful at this stage, Levinson suggests that individuals have to find a new level of involvement in society. One way of doing this may be through stimulating and intellectually enriching travel. The increased popularity of these roles among tourists in late adulthood may well be a reflection of this need (or needs). Indeed, through in-depth interviews with older people, Gibson (1999) observed that tourism has the potential to be very meaningful to persons in late adulthood. She found that many take pleasure from their actual vacations, and spend a lot of time researching and reading about the places they will visit before their actual trip.

CONCLUSION

Iso-Ahola (1980) proposed that because leisure needs are both stable and dynamic in nature, researchers should adopt a lifespan perspective to gain a fuller understanding of such behavior/need relationship. Consistent with his position, Yiannakis and Gibson (1992:300) later suggested that the application of a multidimensional, interdisciplinary model integrating elements from sociology and psychology in a historical framework would likely yield more meaningful results than the use of univariate, one dimensional static models. Thus, by combining the insights from earlier works in the multidimensionality of tourist roles with Levinson's theory of life structure, one is now in a better position to propose that preference may well be a function of stage-linked psychological needs. Such needs appear to assert themselves in interactive clusters at different stages in the lifecourse and reflect a combination of satisfied and unsatisfied needs. The results of this study support the contention that such clusters motivate, or push individuals to select and enact tourist roles which they perceive will enable them to be, and do, what life back home either thwarts, or fails to satisfactorily provide for. In the process of enacting such roles away from home, and immersed for relatively long periods of time in a liminoid state (Lett 1983; Wagner 1977), individuals are able to pursue dreams, interests, and activities which enable them to satisfy a whole hierarchy of needs, ranging from deeply meaningful goals and passions to getting away from it all to recuperate and "recharge the batteries." The time series analyses provide tentative support for this notion and suggest that needs may indeed be leading indicators in this complex interactive process.

Gender differences are also clearly evident in the findings. While the overall tasks associated with specific lifestages may remain similar, as Levinson (1996) suggested, women appear, according to the findings, to engage in activities intended to address such tasks at slightly different stages in the lifecourse. For example, while male Anthropologists peak in their interest for this role during the age 50 transition, women follow about five years later. These patterns suggest that cultural constraints associated with being female, such as those imposed by motherhood, and the subordination of occupational goals and aspirations to those of their spouse, frequently delay and push back the fulfillment of women's dreams. However, by the time many women are in their late 50s they may be less constrained by their familial roles and have the freedom to take vacations where they can explore and learn about the ways of people in other cultures. In the process, this people-oriented role may enable women Anthropologists to learn as much about themselves and resolve inner conflicts about unfulfilled dreams and goals.

By linking the present authors' previous work with the findings of this study, the theory may be extended with a greater degree of confidence. First, gender and lifestage-linked psychological needs (push factors) "drive" the selection and enactment of tourist roles. Second, tourist roles permit the enactment of activities and behaviors in settings

that optimize the mix of stimulation–tranquility, familiarity–strangeness, and structure–spontaneity (the behavioral operating comfort level sought by tourists while on vacation, Yiannakis and Gibson 1992). Third, the enactment of tourist roles in contexts that maximize vacationers' comfort levels enables tourists to enter various liminoid states (Lett 1983; Wagner 1977; Yiannakis and Gibson 1992) that make the satisfaction of both deficit and growth needs possible.

This study provides tentative statistical evidence in support of what has so far been primarily a theoretical contention that tourist role preference is indeed a function of psychological needs. Further, it provides statistical support for the contention that tourist roles serve as vehicles through which vacationers may satisfy or enhance deficit or growth needs. In some cases, the cross-correlation analyses suggest that psychological needs are the driving force of these relationships. Notably, this may be the first piece of quantitative "proof" to date that supports the proposition that psychological needs serve as push factors of vacation behavior. While it is inappropriate to press this point at this research stage, given the limited number of data points in the time series distributions, the findings are suggestive that psychological needs may be the driving force (leading indicator) underlying tourist role preference. Indeed, the joint effects of several needs ultimately influence tourist role selection, not just the presence of deficit states, as suggested in past research (Crompton 1979; Dann 1981; Ryan and Glendon 1998; Wahlers and Etzel 1985; Yiannakis and Gibson 1992). Thus, sound logic and theory, combined with initial quantitative findings, suggest that needs influence the choice of tourist roles that individuals enact while on vacation. As already demonstrated, needs appear to be a function of lifestage as originally suggested by Levinson and associates (1978).

Finally, the results of this study have several practical implications for the tourism industry. By knowing which individuals engage in certain tourist roles, the needs they are attempting to satisfy or enhance (deficit or growth needs) can be determined. Such understandings better inform the marketing process and more accurately target advertising campaigns. In turn, destinations successfully targeting potential tourist populations whose needs match their offering will enhance the vacation experience and satisfaction of their guests through maximizing the destination–motivation fit. ■

Acknowledgements—Funding for the data collection was provided by the University of Connecticut Research Foundation Dissertation Fellowship.

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Submitted 9 July 1997. Resubmitted 11 September 2000. Accepted 8 February 2001. Final Version 2 March 2001. Refereed anonymously. ***Coordinating Editor: Regina G. Schlüter***