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What is This?
Measuring Resident’s Attachment Levels
In A Host Community

SEOHO UM AND JOHN L. CROMPTON

This research note suggests a method of measuring residents’ attachment levels to
distinguish between recent and long-established “native” residents’ perceptions of tourism
impacts on the community. Guttman scaling is used to determine whether birthplace, years
of residence, and heritage measure residents’ attachment levels in a community.

A number of studies have explored the relationship between residents’ sociodemographic characteristics and their percep-
tions of tourism impacts (Pizam 1978; Belisle and Hoy 1980; Pearce 1980). Pizam (1980) and Thomason and Crompton
(1979) suggested that the more dependent people were on tourism for their livelihood, the more positive were their
overall attitudes toward tourism. It has also been suggested that perceptions of tourism impacts vary with the distance a
resident lives from a tourist zone (Belisle and Hoy 1980; Pearce 1980; Sheldon and Var 1984), and with the age of
local residents (Pizam 1980). On the other hand, Brougham and Butler (1981) suggested that residents’ attitudes toward
the social impact of tourism were not consistently related to frequency of tourist contact, length of residence, age, and
language.

To this point, few studies have been reported which de-
scribe tourism impacts in terms of residents’ levels of attach-
ment to a host community, even though long-established
“native” residents’ attitudes toward tourism development
might be different from those of relative newcomers. In a
study which did address this issue, Sheldon and Var (1984)
noted that lifelong residents tended to be more sensitive to the
impact of tourism on their culture.

This exploratory study was used to suggest a method of
measuring residents’ attachment levels to a host community.
This could then be periodically replicated to monitor host
residents’ perceptions of tourism impacts on their community.
It has two subobjectives. The first was to develop a
Guttman scale to measure residents’ attachment level. The
second was to see if such a scale was likely to be useful in
differentiating residents’ perceptions of tourism impacts,
based on their attachment level to the community.

SAMPLE AND DATA COLLECTION

The exploratory study was undertaken in New Braunfels,
Texas. New Braunfels was established in 1845 by German
settlers. Its population is 27,000. German influence in lan-
guage, culture, and traditions is still strong and this German
heritage is one of its attractions. The Guadalupe River flows
through the town, providing an extensive waterfront resort
used by a large number of outdoor recreationists during the
summer. Tourism attractions are located close to each other
in the center of the city. The number of tourists visiting New
Braunfels is rapidly increasing, partially because it is easily
accessible from the nearby metropolitan areas of San Antonio
and Austin.

Questionnaires, with prepaid return envelopes, were
mailed to a random sample of 230 residents. Because of the
exploratory nature of this study, no attempts were made to
implement follow-ups. Sixty-two of the mailed question-
naires were returned. The questionnaire was divided into two
parts. Part 1 consisted of a series of attributes related to
tourism impacts on the community, while part 2 solicited
information on years of residence, birthplace, and heritage.

The attributes used to describe tourism impacts were
selected from items which had been used in previous research
studies. Respondents were asked to identify their perceptions
of tourism impacts through responses on a Likert-type scale
that ranged from “very negative” (−2) to “very positive”
ATTACHMENT LEVEL

Attachment level to the community was defined in terms of years of residence, birthplace, and heritage, which were judged to be central components in identifying between recent and long-established "native" residents. Each item was treated as an ordinal variable which had two or three levels in terms of degree of attachment to the community. Thus, "years of residence" had three levels (under 9 years; 10-19 years; and over 20 years) while both "birthplace" and "heritage" had two levels (No and Yes).

Guttman scaling was used to determine whether those items were useful for measuring the underlying dimension of attachment level. The Guttman scale is a cumulative scale used to determine whether a set of variables measures a single concept and thus whether they can be combined and used as an aggregate measure. In this study, the variable "house ownership (rented and owned)" was originally incorporated into attachment level but was dropped because the item was not consistent with the remaining items. "Birthplace" was positioned as the top scale item, whereas "years of residence" was the bottom scale item with the second level (10-19 years) serving as a division point to determine whether respondents passed or did not pass on the item (Table 1). The scale's coefficient of reproducibility was .90 while its coefficient of scalability was .72, indicating that a large proportion of the total number of responses to those items represented attachment level (Weisberg and Bowen 1977).

Once the legitimacy of the variables had been established, they were combined to construct a Guttman scale for measuring attachment level. Each respondent was assigned a scale score ranging from "1" to "4" based on the number of items passed (the degree of attachment) (Table 1).

RESIDENTS' PERCEPTIONS AND ATTACHMENT LEVEL

The operationalization of "attachment level" made it possible to test for a relationship between residents' perceptions of tourism impacts and their attachment level to the community. Since the variables of interest were measured on either an ordinal scale or an interval scale, a nonparametric statistical test, Kendall's Tau, was used to measure the correlation between residents' perceptions of tourism impacts and attachment level to their community. It measured the extent to which an increase in one variable was accompanied by an increase in another variable (or decrease, if the sign was negative).

Table 1 also indicates that there were significant negative correlations between residents' perceptions of overall tourism impacts and their attachment level. Residents' perceptions of tourism impacts on the environmental quality of their community were not significantly associated at the .05 level with their attachment level. However, with the exception of this dimension, the more attached residents were to the community in terms of birthplace, heritage, and years of residence, the less positively they perceived the tourism impacts on their community. When residents' perceptions of tourism impacts were related to each attachment type, it was found that if residents were of German heritage, they were likely to perceive all tourism impacts on their community less positively than residents who were not of German heritage.

SUMMARY

One of the typical goals of tourism development is to enhance the quality of life of residents in the host community. Assessing the enhancement entails periodically evaluating residents' perceptions of tourism impacts on the community. However, residents are not a homogeneous group, and it is

<table>
<thead>
<tr>
<th>Attachment Types</th>
<th>Attachment Level</th>
<th>Birthplace</th>
<th>German Heritage</th>
<th>Years of Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Level</td>
<td>1. no</td>
<td>2. yes</td>
<td>1. no</td>
</tr>
<tr>
<td>1. General appearance</td>
<td>-.20&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .08</td>
<td>- .24&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .11</td>
</tr>
<tr>
<td>2. Quality of public services</td>
<td>-.22&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .18&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .26&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .17&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>3. Environmental quality</td>
<td>-.06</td>
<td>- .10</td>
<td>- .23&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .08</td>
</tr>
<tr>
<td>4. Adolescent's behavior</td>
<td>-.26&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .14</td>
<td>- .28&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .16</td>
</tr>
<tr>
<td>5. Social contacts with neighbors</td>
<td>-.22&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .26&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .21&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .04</td>
</tr>
<tr>
<td>6. Community spirit</td>
<td>-.27&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .36&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .19&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .24&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>7. Income</td>
<td>-.29&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .26&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .23&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .26&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
<tr>
<td>8. Job opportunities</td>
<td>-.31&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .28&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .25&lt;sup&gt;a&lt;/sup&gt;</td>
<td>- .24&lt;sup&gt;a&lt;/sup&gt;</td>
</tr>
</tbody>
</table>

<sup>a</sup>Significant at α = .05 level (Daniel 1978, 313)
<sup>b</sup>Attachment level was measured by a Guttman scale.

<table>
<thead>
<tr>
<th>Attachment Level</th>
<th>Birthplace</th>
<th>German Heritage</th>
<th>Years of Residence</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1. no</td>
<td>2. yes</td>
<td>1. no</td>
</tr>
<tr>
<td>4</td>
<td>2</td>
<td>2</td>
<td>2 &amp; 3</td>
</tr>
<tr>
<td>3</td>
<td>1</td>
<td>2</td>
<td>2 &amp; 3</td>
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<tr>
<td>2</td>
<td>1</td>
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<td>1</td>
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<sup>c</sup>Kendall's Tau Correlation Coefficient.
reasonable to anticipate that “new” residents may have different perceptions of tourism impacts on their community than “old” residents.

The data in this study were used to develop a method for implementing such evaluations and to test the method’s efficacy. “Attachment level,” when measured by a Guttman scale combining a set of variables such as birthplace, years of residence, and heritage, enables a tourism agency to distinguish between recent, and long-established “native” residents’ perceptions of tourism impacts on the community.

REFERENCES


A Note on the Use of the Trip Index in Travel Cost Analysis

P. W. J. Clough

In an article published in 1983, Douglas Pearce and Jeannette Elliott outlined the use of a trip index to supplement information on length of stay at specific destinations. The proposed index was a relative measure of time at a destination in proportion to total length of trip, and they suggested it could be used to classify all destinations into gateways, stopovers, or principal destinations. Alternatively, the index could be used to classify trips according to the number of stops and the trip index of each stop.

The formula for the trip index is simple, and the information required can easily be collected from travel questionnaires.

\[ TI = \left( \frac{D_n}{T_n} \right) \times 100 \]

where

- \( TI \) = trip index
- \( D_n \) = nights spent at destination
- \( T_n \) = total nights spent on the trip.

The formula means that a single destination trip would have an index of 100; a transit stop with no overnight stay would have an index of 0. Such information gives a clearer idea of a destination’s role in regional tour patterns than the absolute measure of length of stay.

The travel cost method of recreation analysis, as developed by Clawson and Knetsch (1966), attempts to estimate a demand curve for a given recreational site by finding a statistical relationship between the visit rates and travel costs of those currently using the site. A recurring problem in this approach is that of joint consumption benefits: how to apportion travel costs among sites on a multiple destination trip? This is a problem to which the trip index might be applied.

A number of approaches have been suggested to deal with joint consumption benefits. Beardsley (1971) suggested allocating travel costs to site \( j \) according to the following formula:

\[ j’s \text{ share of total costs} = \frac{\text{time at } j/\text{time at all sites}}{\text{total time spent on trip}} \]

McConnell (1975) has argued that the appropriate time variable for recreation analysis is not on-site time, but total time taken to travel to and from the site and experience what it has to offer. Modifying Beardsley’s information in light of this would produce a weighting index very similar to the trip index. More recently, Haspel and Johnson (1982) have proposed an allocation of visitors’ costs from origin zone \( i \) according to the expression

\[ \frac{TC_i}{\text{STOPSi}} \]

where \( \text{STOPSi} \) is the mean number of major destinations for visitors from zone \( i \) and \( TC_i \) is the travel cost from zone \( i \).

The problem with this last approach is that many visitors without a fixed itinerary may not know how many major destinations they will visit. This problem was apparent in a recent study of a national park on the North Island of New Zealand, which had a high proportion of survey respondents on self-drive tours with no particular itinerary in mind. For this reason a measure of length of stay in the area in proportion to total trip length has been investigated as a means of allocating joint consumption benefits. This in turn has highlighted some limitations of the trip index in its original formulation.

SOME THEORETICAL PROBLEMS

According to Pearce and Elliott, the trip index “was devised initially as an attempt to gauge in an objective fashion the attractiveness of a particular place in a given region... The rationale for this was that the relative importance of any place in an overall trip could be determined from the amount of time accorded to visit it.” (1983, p. 6). However, the original formulation of the index is not particularly consistent with the rationale given, and that rationale itself is open to dispute.