


# How Does Emotional Solidarity Factor into Visitor Spending among Birders in the Lower Rio Grande Valley of Texas?

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## Abstract

While most work focusing on emotional solidarity has examined its antecedents, this work highlights outcomes of the construct in the form of visitor expenditures among nature tourists. During the peak tourist season for birders and other outdoor enthusiasts in the Lower Rio Grande Valley of South Texas, on-site survey data were collected from individuals visiting key nature tourist attractions. In examining the relationship between emotional solidarity and visitor expenditures, results revealed that five of the eight multiple regression models were significant. Of the three Emotional Solidarity Scale (ESS) factors used to predict expenditures, *feeling welcomed* explained the most variance. This work provides continued support for extending Durkheim's model of emotional solidarity by including expenditures as an outcome of the construct.

## Keywords

nature tourism, Lower Rio Grande Valley (Texas), multiple regression, visitor expenditures, confirmatory factor analysis, birders

## Introduction

Work examining relationships between residents of and tourists to destinations is fairly well established, dating back to seminal works in anthropology (Graburn 1983; Nash 1981; Smith 1977) and the sociology of tourism (Cohen 1972, 1979; Urry 1990). Much of this work highlighted the relationship as one centered on conflict, later spawning research concerning community impacts of tourism and resident attitudes regarding tourism development. While most of the work pertaining to resident and tourist relationships has been extremely insightful, providing a glimpse into lives of (most often) residents, the research has either been conceptual in nature (i.e., Aramberri 2001; Reisinger 1994) or has utilized a case study approach (i.e., Pearce and Butler 1999; Hall and Richards 2000)—the most recent volume, *The Host Gaze in Global Tourism*, edited by Moufakkir and Reisinger (2013), is a testament to this.

Within the fields of travel and tourism, we have often missed the mark in carrying out empirical research that looks at the immediate or even long-term implications of existing relationships between residents and tourists in a destination. One construct currently being used as a measure of the relationship is emotional solidarity. In an examination of the work focusing on the construct, only one study (Woosnam 2012) addresses the outcomes of emotional solidarity. In fact, nearly all of the emotional solidarity work in the context

of tourism research to date has focused on determinants or antecedents of the construct (see Woosnam 2011a, 2011b; Woosnam, Norman, and Ying 2009; Woosnam and Norman 2010), neglecting to look at emotional solidarity as a precursor to, or predictor of, some other construct. Because of this, a great potential exists for exploratory research that can expand the previously established model of emotional solidarity and provide practitioners with information to make decisions in tourism planning and management.

As Andereck and Nyaupane (2011) alluded to in their work, community quality of life could indeed be dependent upon the relationship (as measured by degree of contact) between residents and tourists. From the tourists' perspective, the interaction visitors have with community residents can greatly impact whether such tourists intend to return (Wearing, Stevenson, and Young 2010), albeit in many

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instances at the expense of Othering locals. Speaking in the context of future work pertaining to emotional solidarity, Woosnam and Aleshinloye (2013) state that, “examining outcome variables such as quality of life and community attachment as well as tourists’ likelihood of returning to the destination or the economic impact on the community, can begin to answer the ‘so what’ question, providing greater practical implications for managers” (p. 502). Considering this statement and the call for further research on emotional solidarity involving residents and tourists from different cultural backgrounds, the purpose of this exploratory work is to examine nature tourists’ (primarily of Anglo descent) perceived emotional solidarity with destination residents (primarily of Latino descent) as a predictor of tourist expenditures within a destination.

## Literature Review

### *Emotional Solidarity*

One measure used most recently to examine the degree of intimacy or closeness in a relationship between individuals is that of emotional solidarity. Hammarstrom (2005) indicated that emotional solidarity is the affective bonds individuals experience with each other that are often characterized by degree of contact and a perceived level of emotional closeness. In a basic sense, emotional solidarity can be thought of as a feeling of identification a person has with someone else (Wallace and Wolf 2006). Emile Durkheim (1995 [1915]) in his *Elementary Forms of the Religious Life* first put forth the idea of emotional solidarity as well as the conceptual framework. In considering Aborigines of Australia, Durkheim (1995 [1915]) postulated that members of a religion forge a sense of emotional solidarity through sharing rituals (i.e., behaviors) and beliefs. It was not until Collins’s (1975) work that interaction among individuals within a group also received attention as being a determinant of solidarity.

A bulk of the most recent research on emotional solidarity has occurred within the disciplines of sociology and gerontology and the field of family studies. Ferring et al. (2009) credit the development of the construct and its empirical application to the work conducted by Gronvold (1988), who first created the Affectual Solidarity Scale (ASS). Much of the work to date has been forged through the creation of the ASS. For instance, Bengtson et al. (2002) suggested a four-fold classification of solidarity (high/low) and conflict (high/low) among family members. Steinbach (2008), as well as others, have since confirmed this parsimonious typology in examining relationships between children and their parents.

With the advent of numerous disasters (both as a result of natural occurrences and acts of man such as rampant shootings and bombings) occurring in society today, research in sociology has focused more attention on group solidarity. The notion of individuals forging solidarity following collective crises was initially put forth in Durkheim’s (1964 [1893])

*The Division of Labor in Society*, “where he noted that reactions against crime produce solidarity in communities” (Nurmi 2012, p. 18). An examination of community responses to school shootings in Finland, Nurmi (2012) highlights the collective constructed narrative of one community as a victim, and therefore promoted public expressions of solidarity. Hawdon and Ryan (2011) focused on the Virginia Tech massacre in examining sustained solidarity among students and faculty members on campus. The authors found that through attending local organizational meetings and frequenting local businesses, levels of solidarity were sustained 5, 9, and 13 months after the tragedy. Such a finding is in keeping with what Durkheim (1995 [1915]) purported, indicating that shared behavior forges solidarity among individuals. Much of the work in family studies, sociology, and gerontology to date conceives of solidarity occurring primarily among individuals in the “in-group” (or intra-), such as within a family or community, and not across or between (inter-) representatives of different social groups.

Work that has considered solidarity among representatives from different communities and social groups has been conducted within the travel and tourism literature, adopting a systems perspective. When Durkheim (1995 [1915]) wrote *Religious Forms*, he was considered (and still is) one of the most prominent structural functionalists, championing the idea that society is a complex system with intricate parts working together to promote solidarity and stability. Within tourism, a similar systems perspective has been offered by Blank (1989) and Leiper (1990) that involves residents, tourists, destination marketing organizations (DMOs), tourism planning entities, the hospitality sector, etc.—all serving a purpose and working together to keep the tourism industry functioning.

The work surrounding emotional solidarity in the travel and tourism literature has adopted a similar systems approach. Conducting focus groups with residents of a tourist destination, Woosnam, Norman, and Ying (2009) formulated items for each construct (i.e., emotional solidarity, shared beliefs, shared behavior, and interaction) within Durkheim’s (1995 [1915]) theoretical model. From the resulting qualitative themes, Woosnam and Norman (2010) developed scales for each of the four constructs and pilot-tested each in multiple settings, examining the psychometric properties of each scale. The Emotional Solidarity Scale (ESS) resulted in three factors: *welcoming nature* (four items); *emotional closeness* (two items); and *sympathetic understanding* (four items). Given Durkheim’s model had never been tested, Woosnam (2011a) was able to test the model and find that, indeed, all three of the predictor constructs (i.e., shared beliefs, shared behavior, and interaction) significantly predicted emotional solidarity and its factors. Up to that point, emotional solidarity had only been looked at from the perspective of residents, not considering how tourists perceived the relationship they had with residents. In a study focusing on both residents’ and visitors’ emotional solidarity with each other in Galveston,

Texas, Woosnam (2011b) found residents indicated a higher degree of emotional solidarity with tourists. Across each of these studies, emotional solidarity was considered the outcome variable. It was not until Woosnam (2012) that emotional solidarity was treated as a predictor variable to explain residents' attitudes about tourism development.

A host of issues can be found within the extant literature concerning emotional solidarity in the field of travel and tourism. Emotional solidarity research (e.g., Woosnam 2011a, 2011b, 2012; Woosnam, Norman, and Ying 2009; Woosnam and Norman, 2010; Woosnam and Aleshinloye 2013) that has surveyed both tourists and residents has involved participants from comparable, Anglo-descendant, cultures in the southeastern United States. One could argue that individuals are more likely to experience emotional solidarity with others if they share a similar cultural background. Woosnam (2011b) called for greater examination of emotional solidarity across individuals from various cultural backgrounds that will address this concern. Additionally, the work has primarily occurred in coastal areas throughout the United States involving mass tourists to such destinations. More specialized forms of tourism (i.e., nature tourists) have yet to be included in the dialogue of relationships between residents and tourists. Finally, in the travel and tourism literature, the construct of emotional solidarity has primarily been utilized as an outcome measure. Only in one instance has emotional solidarity been examined as a predictor of some other measure (Woosnam 2012). Work is needed that examines how emotional solidarity can serve to explain additional variables, such as tourist expenditures, which ultimately serves to explain the economic impacts of tourism.

### *Economic Impacts of Tourism*

As stated above, the verdict is still out on the role emotional solidarity can play in visitor spending. Does the perceived solidarity have any impact on how much a person spends in a destination? This research serves to address such a question. If one only examines a construct such as emotional solidarity for its esoteric contributions to the literature, little information is gained that is useful to practitioners. As a result, this work serves to explore the practicality of emotional solidarity through considering visitor spending.

Research surrounding the economic impacts of tourism is well established throughout the literature and can arguably be considered a major focus of tourism impacts research (Wall and Mathieson 2006). For many in academia researching travel and tourism, numerous opportunities have been afforded that involve working with local, state, national, and international DMOs to determine the "bottom line" for tourism. Only recently has the conversation incorporated dialogue about the triple-bottom-line (i.e., economic, environmental, and social impacts) as the focus of tourism has moved toward sustainability (Dwyer 2005).

While a traditional approach to tourism impacts research parsed out each impact form, a host of recent research has bridged the gap between social and economic impacts of tourism, showing the intricate connections between each form (Gursoy, Chi, and Dyer 2010). A majority of this work situated in a sustainable tourism approach (encompassing the triple-bottom-line either explicitly or implicitly) involves the perspectives of community residents living in tourist destinations. Considering the role of tourism and perceptions of quality of life (QOL) among Arizona residents, Andereck and Nyaupane (2011) found that the perception of the role of tourism (e.g., no, some, or dominant role) in the local economy was positively associated with the perceived economic strength of the community (as a QOL factor), personal benefit of employment in tourism, and contact with tourists. Those that have much regular contact with tourists view the economic impact of tourism more positively as Andereck et al. (2005) found; however, Andereck and Nyaupane (2011) indicate through their findings that personal benefit mediates such a relationship.

Similar findings were found among residents in Fiji and New Zealand. Ward and Berno (2011), confirming support for the contact hypothesis and validating the intergroup theory in their study of locals living in the Pacific, found that more frequent and satisfying interpersonal contact with tourists lead to more positive attitudes toward tourists as well as the perceived impacts (i.e., economic, environmental, social, and cultural) tourists have on the communities in which the locals reside. Furthermore, employment (as a measure of economic impact) within the tourism industry was a significant predictor of residents' attitudes toward tourists (as measure of social impact) (Ward and Berno 2011).

With knowledge that many studies of resident attitudes involving impacts focus on conventional mass tourism development, Gursoy, Chi, and Dyer (2010) also considered perceptions of locals concerning alternative tourism development. What the authors discovered among locals living along the Sunshine Coast of Australia was that "a change in perception of one type of impact (i.e., economic) is likely to influence the perceptions of other types of impacts" (i.e., social or cultural) (Gursoy, Chi, and Dyer 2010, p. 390). Additionally, residents that perceived tourism to create positive economic impacts supported alternative tourism development more than mass tourism development.

**Nature-based tourism.** One form of alternative tourism that has drawn the attention of many in the past decade involves nature-based tourism (Newsome, Moore, and Dowling 2013). Oftentimes, this niche form of tourism involves viewing fauna in their natural habitat. Nature-based tourism often involves wildlife watching which includes the act of "birding" (U.S. Department of the Interior 2013). According to Scott and Thigpen (2003), birders as a form of nature tourists are those who view, identify, or photograph birds. While birder groups are not homogenous in their motivations and

pursuant activities, some demographic commonalities exist. Hvenegaard (2002a) and Scott and Thigpen (2003) report that more experienced birders are older, have a high annual average personal income, and are highly educated. These findings are confirmed by the 2011 National Survey of Fishing, Hunting and Wildlife-Associated Recreation (FHWAR). Little has been documented on the relationship between birders and residents of a destination, but what we do know is somewhat conflicting about their socialization and preference for interaction. Hvenegaard (2002a) reported that across five different nature tourist groupings, social and cultural motivations were minimally important to birders. Contrary to this, Scott and Thigpen (2003) found both casual birders and interested birders desired visiting small quaint towns with friendly and helpful people. According to Hvenegaard (2002b), birders (compared with trekkers and general visitors) tended to stay longer in a destination, thereby allowing for greater opportunities to interact with local residents and spend money.

In terms of economics, according to the 2011 FHWAR, 17.8 million people in the United States took trips to observe birds in the United States in 2011, spending \$17.3 billion on such trips. Birders also tend to spend considerable amounts of money on equipment. According to Scott et al. (2005), slightly more than half of the birders they sampled claimed that if they had to replace all of the equipment they used for birding they would have to spend at least \$981 to do so. Once more, this perspective was supported by the fact that the largest expenditure (49%) among birders in 2011 FHWAR was equipment (U.S. Department of the Interior 2013).

Economic impacts of nature-based tourism are growing in importance as many practitioners serve to legitimize their services or garner support of others by conveying the economic value of preserving particular species and tracts of land for viewing purposes. Catlin et al. (2010) examined the economic impact of whale shark watching in Western Australia and found that in comparing expenditures between 1995 and 2006, individuals are spending less per trip, which they claim is a result of the industry becoming more mainstream and attracting less specialized visitors. In a similar vein of decreasing or negative economic impacts, Riddington et al. (2010) actually found a negative economic impact of wind farms based on two techniques—willingness-to-pay through a survey method and GIS to determine number of tourists and bed spaces exposed to wind farms.

Nature-based economic impact research has also focused on regions with large tracts of public lands (i.e., national parks) for wildlife viewing, hiking, and other forms of non-consumption recreational use. Saayman and Saayman (2006) estimated the spending of visitors to the Kruger National Park in South Africa and found that out of 14 expenditure categories, individuals spent the most on accommodations and transportation within the park. Mayer et al. (2010) also found that visitors to six German national parks spent the most on accommodations. Because conservation is a major component of the overall economy in

areas encompassing natural areas, it is crucial for planners and managers to create an environment with various products (i.e., namely retail) and services for tourists to purchase (Saayman and Saayman 2006).

Works pertaining to economic impacts of nature-based tourism rarely consider relationships between residents and tourists, let alone how such relationship can translate into realized economic impacts for the community. By examining this relationship in the context of economic impacts, a more accurate portrayal of the triple-bottom-line for host communities can be offered. The purpose, therefore, of this paper is to examine nature tourists' (primarily of Anglo descent) perceived emotional solidarity with destination residents (primarily of Latino descent) as a predictor of tourist expenditures within a destination.

## Methods

### *Study Site*

The Lower Rio Grande Valley (LRGV) of Texas, consisting of four counties (Starr, Hidalgo, Willacy, and Cameron) along the U.S.–Mexico border, was selected as the study site for this research. The region is home to various destinations, including Padre Island and Brownsville to the east and Harlingen and McAllen to the west. Visitors are drawn to the region for its unmatched natural amenities, including the coastline and beaches, federal- and state-managed lands, and the Rio Grande River—which all serve as backdrops for the hundreds of migrating bird species heading south. Other pull factors for visitors include the Latino food, art, and way of life that the area is well known for. Resident sociodemographic and socioeconomic information can be found in Table 1. In general, most residents are of Latino origin (ranging from 87.2 to 95.6% across the four counties), with lower household incomes and a low percentage of individuals with at least a bachelor's degree as compared to the state as a whole.

While the area is a hotbed for negative press because of illegal immigration and drug trafficking, the area remains one of the most sought-after destinations for birders in North America. According to Mathis and Matisoff (2004), "Texas is the number one bird-watching state/province in North America, and the Valley is often considered the number two bird-watching destination in North America. The four counties of the Valley—Hidalgo, Starr, Willacy, and Cameron—together have recorded almost 500 bird species—more than all but four states" (p. 2). Nature tourism, primarily in the form of birding, is extremely important to the LRGV regional and local economies. In a study concerning the economic impact of birders to the Valley, Woosnam et al. (2012) found that the

estimated total annual expenditures by intentionals [tourists intentionally seeking the Valley for nature tourism] for 2011 was \$307,052,400. This direct economic contribution from LRGV nature tourism led to a total county-level economic output of \$463.0 million and 6,613 full- and part-time jobs



**Table 1.** 2012 U.S. Census Bureau Sociodemographic and Socioeconomic Information for LRGV Residents by County.

Descriptive Variable	Starr Co. <sup>a</sup>	Hidalgo Co. <sup>b</sup>	Willacy Co. <sup>c</sup>	Cameron Co. <sup>d</sup>	Texas <sup>a</sup>
Population	61,615	806,552	22,058	415,557	26,059,203
Latino origin	95.6%	90.7%	87.2%	88.1%	38.1%
Median household income (2007–2011)	\$25,598	\$32,479	\$22,894	\$32,156	\$50,920
Bachelor's degree or higher (≥25)	9.6%	15.3%	9.2%	14.6%	26.1%

Note: LRGV = Lower Rio Grande Valley; Co. = County.

<sup>a</sup>Information obtained through U.S. Census Bureau at <http://quickfacts.census.gov/qfd/states/48/48427.html>.

<sup>b</sup>Information obtained through U.S. Census Bureau at <http://quickfacts.census.gov/qfd/states/48/48215.html>.

<sup>c</sup>Information obtained through U.S. Census Bureau at <http://quickfacts.census.gov/qfd/states/48/48489.html>.

<sup>d</sup>Information obtained through U.S. Census Bureau at <http://quickfacts.census.gov/qfd/states/48/48061.html>.

annually. This total contribution includes a \$266.6 million contribution to gross regional product and a \$163.0 million contribution to labor income across the region. (p. ii)

To accommodate birders throughout the LRGV region, the World Birding Center (WBC) was developed. It includes nine locations: the Bentsen-Rio Grande Valley State Park, Edinburg Scenic Wetlands, Estero Llano Grande State Park, Harlingen Arroyo Colorado, Old Hidalgo Pumphouse, Quinta Mazatlan, Resaca de la Palma, Roma Bluffs, and South Padre Island Birding and Nature Center and is composed of land owned and managed by local, state, and federal agencies along the 120-mile historic river road. In 2010, the WBC was formed through a \$20-million development project resulting from the joint partnership between the Texas Parks and Wildlife Department, Rio Grande Valley communities, and the U.S. Fish and Wildlife Service (WBC 2013). This joint partnership of various land management agencies teaming up with DMOs for sustainable management is likely one of the only endeavors of its kind set up for birders throughout the world and offers many prime locations to survey nature tourists for this project (WBC 2013).

### Sampling and Data Collection

The research presented in the current paper is part of larger, year-long survey of nature tourists to the LRGV both during off-peak (March–September) and peak (October–February) seasons. This paper focuses solely on data collected during the peak tourist season. It should be noted that such a peak tourist season is vastly different than the typical time of the year for a destination in the Northern Hemisphere; however, it corresponds with bird migration patterns as various species make the trek south to Central and South America.

Over six weekends (Saturdays and Sundays between 9:00 A.M. and 5:00 P.M.) in October, November, December, and January, visitors to seven sites (Estero Llano Grande State Park and World Birding Center; Bentsen Rio Grande State Park and World Birding Center; Santa Ana National Wildlife Refuge; Edinburg Scenic Wetlands and World Birding Center; Alamo Inn, a lodging establishment frequented among nature tourists; Frontera Audubon; and South Padre

Island World Birding Center) and the 18th Annual Rio Grande Valley Birding Festival in Harlingen were intercepted by researchers on-site and asked to complete a self-administered survey instrument. It should be noted that times during the 9:00 A.M. and 5:00 P.M. window on Saturday and Sundays were randomly selected using a random numbers table and researchers were stationed in each of the sites at selected times. Using a simple random sampling scheme, each researcher initially approached every fourth group of visitors and asked if they were willing to complete the two-page survey instrument. Only one person within each group was asked to be a participant, so as to minimize the potential for inflated figures given representatives of the same group may think, act, or spend similarly.

During the peak season, 486 visitors were contacted and asked to participate. Fifty-four individuals declined to participate, while 49 were repeat visitors at one of the other sites. The remaining 383 individuals accepted the instrument, which resulted in a response rate of 88.5% for the peak season. On closer inspection of the data set, it was revealed that 82 individuals indicated they resided within one of the four LRGV counties and were thus excluded from subsequent analysis. Overall, 301 completed survey instruments were considered for analysis.

### Survey Instrument and Data Analysis

The two-page survey consisted of a front page with a series of questions pertaining to travel behavior (e.g., origin zip code, number in party, and length of stay in LRGV to participate in nature tourism during trip and throughout year). In addition to this, participants were asked to estimate expenditures in the LRGV for eight categories throughout the year. Those expenditures include access fees, restaurants and bars, transportation, lodging expenses, nature tourism merchandise, other retail merchandise, other entertainment, and miscellaneous expenses. The second page of the instrument included sociodemographic and socioeconomic questions, measures concerning their perceived safety with the region, and the 10-item Emotional Solidarity Scale (ESS) developed by Woosnam and Norman (2010).

**Table 2.** Descriptive Summary of Participants.

Variable	<i>n</i>	%
<b>Sociodemographic and socioeconomic</b>		
Age ( <i>n</i> = 298, <i>M</i> = 57.0 years of age)		
18–29	17	5.7
30–39	26	8.7
40–49	29	9.7
50–59	63	21.1
≥60	163	54.7
Gender ( <i>n</i> = 298)		
Female	147	48.8
Male	151	50.2
Income (\$, <i>n</i> = 269, <i>Median</i> = 75,000–99,999)		
<50,000	54	17.9
50,000–74,999	56	18.6
75,000–99,999	54	17.9
100,000–149,999	64	21.3
≥150,000	41	13.6
Education ( <i>n</i> = 297, <i>Median</i> = Undergraduate degree)		
High school diploma or GED	35	11.6
Technical, vocational, or trade school	39	13.0
Undergraduate degree	93	30.9
Graduate degree	130	43.2
<b>Travel behavior</b>		
Origin ( <i>n</i> = 301)		
United States, non-Texas	159	52.8
United States, Texas	97	32.2
Canada	19	6.3
United Kingdom	18	6.0
Mexico	4	1.3
Denmark, Japan, Panama, and South Africa (each with one respondent)	4	1.3
First-time visitor ( <i>n</i> = 294)		
No ( <i>M</i> <sub>number of previous visits</sub> = 9.0)	219	72.8
Yes	75	24.9
Number of people traveling alone versus in group ( <i>n</i> = 301)		
Alone	56	18.9
In group ( <i>M</i> <sub>group size</sub> = 2.6 people including self)	245	81.1
Number of days in LRGV for nature tourism on current trip ( <i>n</i> = 277, <i>M</i> = 6.9 days)		
Number of days in LRGV for nature tourism during year ( <i>n</i> = 292, <i>M</i> = 11.4 days)		

Note: LRGV = Lower Rio Grande Valley.

Initial analysis of data was conducted employing univariate (i.e., standardizing raw data and examining *z* scores) and multivariate (i.e., Mahalanobis's distance) screening techniques as per Tabachnick and Fidell (2013). Overall, 41 cases had at least one raw data point transformed from the univariate screening while no cases were excluded from analysis as being problematic. Missing data were imputed through expectation-maximization procedures by predicting scores in a series of regressions where each missing variable is regressed on remaining variables for a particular case (Kline 2011). Such imputation was necessary for confirmatory factor analysis (CFA) within EQS 6.2 and only applied to six cases.

In order to examine the factor structure of the ESS and its psychometric properties (i.e., forms of reliability and

validity), CFA in EQS 6.2 was utilized. To determine whether emotional solidarity significantly predicted tourist expenditures, a series of eight multiple linear regressions was employed using IBM SPSS v.21.

## Findings

### Sample Description

A descriptive summary of the sample (based on the 301 usable survey instruments) can be found in Table 2. Visitors can be profiled considering sociodemographic and socioeconomic variables as well as by their travel behavior. The average age of visitors was 57, with a majority (54.7%) being at

**Table 3.** Confirmatory Factor Analysis of Emotional Solidarity Items.

Factor and Corresponding Item	Factor Mean <sup>a</sup>	Standardized Factor Loading (t Value <sup>b</sup> )	Reliabilities	
			Maximal Weighted	Composite
Feeling Welcomed	5.80		.92	.91
I feel residents appreciate the social benefits associated with me coming to the community		.891 (18.02)		
I am proud to be welcomed as a visitor to the LRGV		.884 (12.97)		
I feel residents appreciate the contribution we (as visitors) make to the local economy		.853 (14.33)		
I treat LRGV residents fairly		.770 (8.43)		
Emotional Closeness	4.85		.99	.92
I feel close to some LRGV residents I have met		.935 (17.54)		
I have made friends with some LRGV residents		.907 (18.00)		
Sympathetic Understanding	5.18		.92	.92
I identify with LRGV residents		.893 (18.69)		
I feel affection towards LRGV residents		.861 (14.36)		
I have a lot in common with LRGV residents		.859 (17.68)		
I understand LRGV residents		.805 (18.16)		

Note: LRGV = Lower Rio Grande Valley.

<sup>a</sup>Items were rated on a 7-point scale, where 1 = *strongly disagree* and 7 = *strongly agree*.

<sup>b</sup>All t-tests were significant at  $p < 0.001$ .

least 60. Gender was nearly split down the middle between female and male. Nearly three-quarters of participants had at least an undergraduate and slightly more than half had a household income of at least \$75,000. These data highlight the disparity with tourists' socioeconomic background as compared with LRGV residents (see Table 1). Such a socioeconomic background is somewhat representative of birders, many of whom possess high levels of education and wealth (Hvenegaard 2002a; Scott et al. 2005).

As shown in Table 2, tourists arrived from various locations throughout North America and beyond, with the largest percentage hailing from a state in the United States other than Texas. In terms of travel behavior, 72.8% of the sample said they had visited the LRGV in the past, having come on average nine times prior. Sample participants also indicated that on average, they were in the region for seven days for nature tourism on the current trip. A breakdown of group size revealed that approximately 19% ( $n = 56$ ) of participants traveled alone, with the remaining 81% ( $n = 256$ ) having traveled, on average, in a group of 2.6 individuals. When asked how many days they planned on being in the LRGV throughout the entire year for nature tourism, respondents on average indicated they would be there for 11 days.

### Factor Structure of the Emotional Solidarity Scale (ESS) and Its Psychometric Properties

Prior to assessing the relationship between tourists' emotional solidarity with residents and their nature tourism expenditures, the factor structure of the ESS was examined. Given the ESS has been utilized in prior studies (Woosnam and Norman 2010; Woosnam 2011a, 2011b) and yielded the

same three-factor structure—*feeling welcomed*, *emotional closeness*, and *sympathetic understanding*—CFA was deemed appropriate to use. The CFA model was constructed one factor at a time requesting LaGrange Multiplier tests per Kline's (2011) suggestions. Such a procedure is similar to forward stepwise regression, where each of the three factors is added sequentially to establish an "ideal" model where incremental and absolute model fit indices are perfect. However, the ideal model includes all of the error parameters (i.e., error covariances and cross-loading items) that have resulted in previous model runs (e.g., second model run includes first and second factor along with all error parameters from first factor run, and so on). Upon adding all three factors to the model, 17 error parameters (i.e., 13 error covariances and 4 cross-loading items) were identified and included within the ideal model.

From that point, the ideal model was trimmed by requesting Wald tests (similar to backward stepwise regression) to remove as many error parameters while maintaining the 3.84  $\Delta\chi^2/\text{df}$  critical value established by Tabachnick and Fidell (2013). Each of the 17 error parameters was removed without exceeding the critical value. The final model with all three factors added retained all 10 ESS items (see Table 3), considering the robust Satorra–Bentler scaled  $\chi^2$  (32,  $N = 301$ ) = 103.18,  $p < 0.001$ , comparative fit index (CFI) = 0.94, Bentler–Bonett nonnormed fit index (NNFI) = 0.92, root mean square error of approximation (RMSEA) = 0.08. According to Hu and Bentler (1999), a rule of thumb for comparative fit indices (i.e., CFI, goodness-of-fit index [GFI], NNFI, etc.) is that values greater than 0.90 may indicate reasonably good fit of the model to the data just as values equal to or less than 0.08 for absolute model fit indices

**Table 4.** Discriminant Validity Analysis from Emotional Solidarity Confirmatory Factor Analysis.

Factors	1	2	3
1. Feeling Welcomed	<b>.72<sup>a</sup></b>		
2. Emotional Closeness	.57 <sup>b</sup>	<b>.85</b>	
3. Sympathetic Understanding	.61	.62	<b>.73</b>

<sup>a</sup>The bold diagonal elements are the square root of the variance shared between the factors and their measures (average variance extracted).

<sup>b</sup>Off-diagonal elements are the correlations between factors. For discriminant validity, the diagonal elements should be larger than any other corresponding row or column entry.

is considered a good fit. Upon close inspection of the standardized factor loadings, one can see that all values exceeded the critical value of 0.70, which Fornell and Larcker (1981) claim to be ideal.

Psychometric properties of the ESS and its factor structure were then examined. Two forms of reliability were assessed for each of the factors, which showed that each exhibited high internal consistency. Both maximal weighted alphas (the robust reliability estimate produced in EQS 6.2) and composite reliabilities for the ESS factors are presented in Table 3. As can be seen, reliability coefficients exceeded the critical value of 0.80, established by Lance, Butts, and Michels (2006) showing that each item within the factors are highly correlated with one another. In an effort to examine validity of the ESS, the construct validity (i.e., convergent and discriminant) was assessed (Churchill 1979). By examining *t* values corresponding with each item factor loading, convergent validity can be shown if such values do not exceed the 3.29 critical value as put forth by Tabachnick and Fidell (2013). Table 3 indicates that all values indeed surpass the critical value; therefore, the ESS demonstrates convergent validity. Checking convergent validity does not make much sense unless discriminant validity is also assessed (Campbell and Fiske 1959). Discriminant validity was established by comparing intercorrelations of factors with the square root of the average variance (i.e., variance extracted estimate) for each factor (Hatcher 1994) (see Table 4). Given that the estimate for variance extracted for each factor was at least 0.50 and exceeded any of the factor intercorrelations suggests that the three ESS factors possess discriminant validity (Fornell and Larcker 1981).

### ESS Factors across Tourist Expenditures

Composite means were calculated for each of the ESS factors based on CFA results (see Table 3). The mean of *feeling welcomed* ( $M = 5.80$ ) exceeded that of *sympathetic understanding* ( $M = 5.18$ ) and *emotional closeness* ( $M = 4.85$ ). To examine whether emotional solidarity significantly predicted tourist expenditures, eight multiple regression models were formulated using the enter method; each model had one tourist expenditure as the dependent variable, with each of the

**Table 5.** Nature Tourism Self-Reported Expenditure Means for the Year.

Nature Tourism Expenditure ( $N = 291$ )	$M$ (\$)
Access fees (e.g., entrance fees, parking fees, guiding fees, festival registration)	124.72
Restaurants and bars	266.28
Transportation (e.g., gas, rental car, repairs)	305.80
Lodging expenses	581.70
Nature tourism merchandise (e.g., optics, maps, books, nature-related clothing)	102.64
Other retail merchandise (e.g., clothing, groceries, gifts)	214.85
Other entertainment (e.g., movies, gaming centers, concerts)	43.76
Miscellaneous expenses	35.91

three ESS factors serving as independent variables. Means for each of the eight expenditures can be found in Table 5. Nature tourists spent the most on average for lodging, transportation, and at restaurants and bars. The least amount was spent on other entertainment, miscellaneous expenses, and nature-tourism merchandise.

As can be seen from Table 6, ESS factors significantly predicted all but three of the expenditures—access, private auto expenses, and miscellaneous. Model summary statistics, predictor coefficients, and multicollinearity statistics (e.g., tolerance and variance inflation factor [VIF]) are presented in the table. Tolerance in each of the models exceeds the 0.20 suggested threshold while VIF does not exceed the 5.0 threshold—considered together, this indicates that multicollinearity is not an issue (O'Brien 2007). It should be noted that tolerance and VIF are constant across the models as the same three independent variables (i.e., the three ESS factors) are used in each model.

Emotional solidarity significantly predicted five different expenditure forms. In Model 2, emotional solidarity ( $F_{3,272} = 3.80, p < 0.05; R^2 = 0.06$ ) significantly predicted the amount of money visitors estimated spending on restaurants and bars. All three of the ESS factors—*feeling welcomed* ( $t = 2.02, p < 0.05; \beta = 0.01$ ), *emotional closeness* ( $t = 0.55, p < 0.05; \beta = 0.04$ ), and *sympathetic understanding* ( $t = 1.68, p < 0.01; \beta = 0.14$ )—were significant variables in the model. Model 4 was also significant, with emotional solidarity ( $F_{3,272} = 3.41, p < 0.05; R^2 = 0.02$ ) predicting estimated spending on lodging among the nature tourists. In this model, however, only *feeling welcomed* ( $t = 1.32, p < 0.05; \beta = 0.12$ ) and *sympathetic understanding* ( $t = 1.96, p < 0.05; \beta = 0.15$ ) were significant variables. In Model 5, emotional solidarity ( $F_{3,272} = 2.87, p < 0.05; R^2 = 0.03$ ) significantly predicted the amount of money visitors estimated spending on nature tourism merchandise. Again, only two ESS factors—*emotional closeness* ( $t = 1.02, p < 0.05; \beta = 0.08$ ) and *sympathetic understanding* ( $t = 2.10, p < 0.05; \beta = 0.18$ )—were significant variables in the model.



**Table 6.** Multiple Regression Output.

Expenditure Models with ESS Factors <sup>a</sup>	B	Beta ( $\beta$ )	t	Tolerance <sup>b,c</sup>	VIF
Model 1: Access ( $F = 1.89$ , $p = 0.71$ , $R^2 = 0.01$ )					
Feeling Welcomed	12.08	0.08	0.95	0.53	1.88
Emotional Closeness	(4.29)	(0.04)	(0.53)	0.65	1.55
Sympathetic Understanding	1.14	0.01	0.10	0.49	2.05
Model 2: Restaurants and Bars ( $F = 3.80$ , $p = 0.04$ , $R^2 = 0.06$ )					
Feeling Welcomed	1.13	0.01	2.02*	0.53	1.88
Emotional Closeness	7.28	0.04	0.55*	0.65	1.55
Sympathetic Understanding	31.77	0.14	1.68**	0.49	2.05
Model 3: Transportation ( $F = 1.93$ , $p = 0.13$ , $R^2 = 0.02$ )					
Feeling Welcomed	(5.53)	(0.02)	(0.25)	0.53	1.88
Emotional Closeness	21.34	0.11	1.52	0.65	1.55
Sympathetic Understanding	14.29	0.06	0.71	0.49	2.05
Model 4: Lodging ( $F = 3.41$ , $p = 0.04$ , $R^2 = 0.02$ )					
Feeling Welcomed	60.25	0.12	1.32*	0.53	1.88
Emotional Closeness	25.86	0.07	1.18	0.65	1.55
Sympathetic Understanding	52.16	0.15	1.96*	0.49	2.05
Model 5: Nature Tourism Merchandise ( $F = 2.87$ , $p = 0.03$ , $R^2 = 0.03$ )					
Feeling Welcomed	(18.68)	(0.11)	(1.40)	0.53	1.88
Emotional Closeness	8.70	0.08	1.02*	0.65	1.55
Sympathetic Understanding	25.65	0.18	2.10*	0.49	2.05
Model 6: Other Retail Merchandise ( $F = 5.60$ , $p < 0.01$ , $R^2 = 0.06$ )					
Feeling Welcomed	47.83	0.16	2.23*	0.53	1.88
Emotional Closeness	20.64	0.10	1.35*	0.65	1.55
Sympathetic Understanding	45.26	0.17	2.06*	0.49	2.05
Model 7: Other Entertainment ( $F = 6.43$ , $p < 0.01$ , $R^2 = 0.07$ )					
Feeling Welcomed	14.67	0.18	2.92*	0.53	1.88
Emotional Closeness	3.19	0.05	0.73*	0.65	1.55
Sympathetic Understanding	17.15	0.23	2.72*	0.49	2.05
Model 8: Miscellaneous ( $F = 2.02$ , $p = 0.11$ , $R^2 = 0.02$ )					
Feeling Welcomed	19.01	0.17	2.10	0.53	1.88
Emotional Closeness	4.30	0.56	0.75	0.65	1.55
Sympathetic Understanding	(16.31)	(0.17)	(1.98)	0.49	2.05

Note: ESS = Emotional Solidarity Scale; VIF = variance inflation factor.

<sup>a</sup>Each of the ESS items were asked on a 7-point scale where 1 = *strongly disagree* and 7 = *strongly agree*.

<sup>b</sup>Tolerance is a measure that assesses the degree of multicollinearity in the model. It is defined as 1 minus the squared multiple correlation of the variable with all other independent variables in the regression equation.

<sup>c</sup>VIF (variance inflation factor) is another measure that assesses the degree of multicollinearity in the model. VIF is defined as 1/tolerance; and is always greater than 1.

\* $p < 0.05$ . \*\* $p < 0.01$ .

Models 6 and 7, concerning other expenditures (i.e., other retail merchandise and other entertainment), indicated the strongest degree of significance for emotional solidarity and its factors as predictors. In Model 6, emotional solidarity ( $F_{3,272} = 5.60$ ,  $p < 0.01$ ;  $R^2 = 0.06$ ) significantly predicted the amount of money visitors estimated spending on other retail merchandise. As with Model 2, *feeling welcomed* ( $t = 2.23$ ,  $p < 0.05$ ;  $\beta = 0.16$ ), *emotional closeness* ( $t = 1.35$ ,  $p < 0.05$ ;  $\beta = 0.10$ ), and *sympathetic understanding* ( $t = 2.06$ ,  $p < 0.05$ ;  $\beta = 0.17$ ) all significantly predicted spending on other retail merchandise. Finally, Model 7 was also significant ( $F_{3,272} = 6.43$ ,  $p < 0.01$ ;  $R^2 = 0.07$ ) in revealing emotional solidarity predicting nature tourists' estimated expenditures on other

entertainment. Again, all three ESS predictors—*feeling welcomed* ( $t = 2.92$ ,  $p < 0.05$ ;  $\beta = 0.18$ ), *emotional closeness* ( $t = 0.73$ ,  $p < 0.05$ ;  $\beta = 0.05$ ), and *sympathetic understanding* ( $t = 2.72$ ,  $p < 0.05$ ;  $\beta = 0.23$ )—were significant variables in the model.

It should be noted that each of the  $\beta$  reported in the models above are standardized. Interpretation of each makes little intuitive sense, given results are not presented in terms of initial scales (i.e., ESS on a scale of 1–7 and expenditures in terms of dollars). However, if one examines the unstandardized betas ( $B$  in Table 6), interpretation of the original scales can occur. For example in Model 2, for every unit increase in degree of *feeling welcomed*, tourists spend \$1.13 more on

restaurants and bars, just as with every unit increase in *sympathetic understanding*, they would spend \$31.77 more on restaurants and bars.

## Conclusion and Discussion

Despite the extensive literature focusing on economic impacts of tourism and tourist expenditures, little research has considered how the perceived degree of closeness between tourists and residents can influence how much these visitors spend while at the destination. Building on the work of Woosnam and colleagues (i.e., Woosnam, Norman, and Ying 2009; Woosnam and Norman 2010; Woosnam 2011a), this work sought to expand Durkheim's (1995 [1915]) framework by examining emotional solidarity as a precursor to nature tourists' expenditures. This study marks the first time emotional solidarity has been examined in a tourism context involving tourists and residents from numerous cultural backgrounds. Relative to previous studies, tourists indicated a higher degree of emotional solidarity with residents. Most notably, means for each of the ESS factors were higher in this study than in Woosnam's (2011b) work, which is the only existing research measuring tourists' perceived emotional solidarity with residents. This may be explained by the fact that nearly 75% of the sample had visited the region before, potentially having made contact with residents during previous visits. Additionally, this may be explained by two other findings from the literature. First, birders tend to stay in destinations longer than other forms of travelers as found by Hvenegaard (2002b), which allows more time to interact and potentially forge solidarity with residents. Second, some birders (e.g., casual and interested) have been found to prefer visiting areas where people are friendly and helpful (Scott and Thigpen 2003). Such a preference would appear to be a precursor to forging solidarity with others. Factor means for the current study were by and large higher than those reported among residents in Woosnam (2011a) and Woosnam (2012). This may be explained by the fact that tourists have been found to view the relationship with residents more positively than residents do with tourists as well as place more emphasis on interaction (Reisinger and Turner 1998).

Any time scales are utilized in research, even though they may have been vetted with previous research, it is important to consider psychometric properties of the measures (Churchill 1979). It is crucial to investigate both reliability and validity of said scales so as to evaluate the quality of measures in the social sciences (Furr and Bacharach 2008) in an effort to combat poor items and measures. Considering the robust estimates of reliability (maximal weighted and composite), coefficients were extremely high, indicating continued internal consistency for the ESS. Furthermore, with construct validity demonstrated through convergent and discriminant validity, this work provides further proof that the scale accurately measures emotional solidarity. Having

conducted this work in a context with tourists and residents from diverse cultural backgrounds, results from this study further show the usability of ESS in various contexts.

Nature tourists spent the most on accommodations and transportation, which is similar to what Saayman and Saayman (2006) as well as Mayer et al. (2010) found in their studies concerning nature tourist expenditures. This is not surprising given the fact that birders visiting the LRGV tend to have large amounts of discretionary incomes and come from all over the world to visit the region. Based on the multiple regression models, it can be said that emotional solidarity does indeed predict nature tourists' expenditures. The five expenditures that were predicted were restaurant and bar expenses, lodging, nature tourism merchandise, other retail merchandise, and other entertainment. The results can be explained by the fact that each of these expenses is most likely to occur in a context where tourists interact most with residents in the LRGV. As Woosnam (2011a) found, interaction is a precursor for emotional solidarity. The only expenditures not predicted from emotional solidarity were access, transportation, and miscellaneous expenses. Access and transportation relate to the business of birding in a large region with several viewing areas while miscellaneous expenses include items like cameras and pharmacy purchases (e.g., medicines and sunscreen). Spending on merchandise, entertainment, lodging, and dining out provide both opportunities for interaction between residents and tourists and opportunities for tourists to express solidarity through spending.

In each of the five significant models, however, emotional solidarity factors explained a modest degree of variance (i.e., 2%–7%) for expenditures. This could be due in part to large ranges in raw data for each expenditure. Of the three ESS factors, *feeling welcomed* was the best predictor, which was significant in each of the five models. The only other work examining outcomes of emotional solidarity found that *sympathetic understanding* was the best predictor of residents' perception of tourism development. In the current study, *emotional closeness* and *sympathetic understanding* were each significant in only four of the five models.

## Implications

Theoretical and practical implications exist for this work. Findings from this study indicate support for extending Durkheim's (1995 [1915]) model. That is to say, expenditures or a form of economic impact of tourism should be added to the model in subsequent research as an outcome of emotional solidarity along with the antecedents of the construct (i.e., shared beliefs, shared behavior, and interaction) to further the framework established in Woosnam (2011b). Beyond this, following the theory of planned behavior, intentions to revisit and actual visitation should be considered as additional outcomes in the model, especially since experiences one has in a destination can have a lasting impact on

tourists (McGehee and Santos 2005). In terms of the degree of emotional solidarity perceived with residents, nature tourists indicated a fairly high level of the construct. Such a finding can likely be explained by the fact that birders tend to stay longer in a destination than other visitors and have been found to prefer socialization and the cultural experience destinations afford. While we did not test for this relationship, future research should consider it. Work conducted around the contact hypothesis (Ward and Berne 2011) would contend that the more opportunities that are afforded to interact with residents, the greater the chance of experiencing closeness. Given nature tourism is likely a form of “alternative tourism” as Weaver (2014) suggests, the verdict is out as to whether such solidarity is unique to such forms of tourism or if indeed it could be experienced in mass tourism.

With the importance governmental officials, DMOs, and tourism planning organizations place on tourist expenditures and economic impacts of tourism in making decisions, this work has a host of practical implications that should be considered. Results indicate the emotional solidarity these nature tourists experience with residents significantly predicted many of their high-end spending behaviors, including restaurants/bars, lodging, and nature tourism merchandise. From Table 6, one can see how the degree tourists feel welcomed and experience sympathetic understanding with residents translates to the highest expenditures in the models.

It is important for practitioners to understand the elements underlying emotional solidarity that predict expenditures. For example, *feeling welcomed*, a significant predictor for lodging and restaurant/bar expenditures, includes tourists feeling their social and economic contributions are appreciated as well as tourists feeling proud to be a welcomed visitor. *Sympathetic understanding*, a significant predictor of all three high-expenditure categories, includes interactions that allow the visitor to identify with, feel affection toward, have a lot in common with, and understand residents. To ensure emotional solidarity and its underlying elements are being supported, practitioners should encourage experiences and tourist–resident interactions that allow visitors to connect with and bond with residents on a personal level as well as feel like a valuable contributor to the community. These types of interactions and experiences can also develop *emotional closeness*—feeling close to and making friends with residents—a significant predictor of restaurant/bars and nature tourism merchandise expenditures.

It is important to note the nature tourists in this study are not cursory visitors. That is, on average, these small groups, typically two people, stay in the LRGV approximately 7 days per visit, 11 days per year, and have visited nine times previously. Thus, hospitality and particularly making people feel welcome (a key and consistent predictor of all three high-end expenditures) should go beyond basic trainings and interactions that encourage simply being “friendly” and “helpful” and should instead be based on encouraging

residents to engage in dialog and activities with visitors that allow them to develop meaningful personal connections that can lead to shared understandings, relationships, and a sense of belonging.

### Limitations and Future Research

While this work examined tourists from various cultural backgrounds (67.8% coming from outside of Texas) (an obvious advancement from previous studies), only 15% of the sample participants originated from countries outside of the United States. In light of the current findings of this study, some caution is necessary in generalizing results to contexts vastly different from the current study area. The next logical progression of studies in this line of research should encompass the examination of emotional solidarity between residents and tourists of different nationalities, in a more international destination. It remains to be seen if levels of emotional solidarity would drastically differ from previous work if the construct was examined considering the relationship between residents in the Global South and tourists in the Global North. Given emotional solidarity is forged through a sharing of beliefs, engaging in similar behavior, and interaction, an ideal context in which to examine degrees of solidarity would be at festivals or special events that bring individuals from all walks of life together (Getz 2008) and that may have worldwide appeal (e.g., cultural festivals or major sporting events). Furthermore, research involving emotional solidarity should be done in multiple destinations involving different groups of tourists (i.e., those engaging in mass tourism vs. those engaging in “alternative” forms of tourism), to see if findings provide support for Weaver’s (2014) dialectical thesis as it pertains to community-based tourism and relationships between residents and tourists.

Each of the models tested in this study explained extremely small degrees of variance in each of the outcome variables. With that said, it is apparent that factors in addition to emotional solidarity would serve to explain a greater degree of variance in nature tourists’ expenditures. As Gursoy and colleagues (see Gursoy, Chi, and Dyer 2010; Nunkoo and Gursoy 2012) have demonstrated and Kline (2011) has purported, adding more explanatory variables to the model increases effect sizes. Potential variables that may serve to explain a greater degree of variance in nature tourists’ expenditures include level of previous travel, length of stay on current trip and throughout time, degree of discretionary income, degree of birding specialization, etc. Perhaps some of these additional variables could be considered in models as predictor variables of emotional solidarity as well as expenditures (in considering moderating effects). Coupled with this, we did not assess nature tourists’ level of substitutability for alternative locations or place attachment—both of which could serve to explain the perceived relationship with residents and how much money they spend at the destination.

Each of these constructs should be measured in subsequent studies.

Taking into consideration participants' burden of time in completing on-site surveys, additional variables were not included on the instrument that could have potentially shed greater light on the relationship between tourists and residents. For instance, degree of interaction was not included. As Woosnam and Norman (2010) have indicated, such a construct included in their emotional solidarity model has significantly explained emotional solidarity to date. Additionally, the extent of repeat visitation (both as intention and actual behavior) to restaurants, bars, and shops may have served to explain expenditures, above and beyond that which solidarity explained. Future studies should consider these measures that may indeed serve to explain not only the relationship between tourists and residents but also tourists' expenditures.

Ultimately, this work furthers the emotional solidarity line of research in travel and tourism in developing Durkheim's (1995 [1915]) model, but much work still needs to be done. In order to understand more about the process of individuals forging this connectedness, qualitative research should be conducted in an environment that demonstrates signs of a positive relationship between residents and tourists, most likely using a case study approach. Such a location would be marked by intimate interaction that occurs between residents and tourists much like Reisinger (1994) highlighted. As is demonstrated from this current study, the relationship that exists between residents and tourists is not something that has brief, immediate impacts on the community. For many tourists, the solidarity they feel with residents arguably has a lasting impact. For this reason, work should be done that examines how emotional solidarity changes over time, such as using a longitudinal approach. Ultimately, a host of research still needs to be done that helps us better understand emotional solidarity.

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