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Place happiness: its constituents and the influence of emotions and subjective importance on activity type and destination choice

Kate Deutsch-Burgner · Srinath Ravualaparthy · Konstadinos Goulias

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Abstract The way in which a person organizes his or her day, both temporally and spatially, is a highly important matter to travel behavior and travel demand modeling. Many times, the focus of these models is to accurately predict the "where" and "when", without paying adequate attention to the "why." The participation in activities, and therefore the selection of a place for these activities has been recently discussed within the framework of subjective well being. The motivation of happiness can be used to understand how and why people make the choices that they do. Many different criteria are used by individuals in the selection of destinations. These criteria range from attributes such as distance and cost, to attributes such as comfort, security and social aspects in determining the most rewarding destinations. Aspects contributing to a rewarding experience can also be viewed as those decision criteria that lead to the highest satisfaction. In this paper, several attributes of places and decision-making are explored for their potential to explain destination choices. First, a broader analysis of destination choice and criteria used helps us develop a geographic representation of attitudes and views regarding the area of Santa Barbara, California. Following this general evaluation of space, individual activity types are statistically analyzed in the importance different attributes play in the selection of a destination that leads to higher satisfaction.

K. Deutsch-Burgner (✉) · K. Goulias
Department of Geography Geotrans Laboratory, University of California, Santa Barbara, 1832 Ellison Hall, Santa Barbara 93106, CA, USA
e-mail: deutsch@geog.ucsb.edu

K. Goulias
e-mail: goulias@geog.ucsb.edu

K. Deutsch-Burgner
Data Perspectives Consulting, Santa Barbara, USA

S. Ravualaparthy
Cambridge Systematics, 555 12th St. #1600, Oakland 94607, CA, USA
e-mail: srinath@geog.ucsb.edu

Travel behavior analysis · Place attitudes · Subjective well being · Happiness · Destination choice

Introduction

The motivation to participate in activities in different locations is well accepted as the main reason for the initiation of travel. The reason for this motivation to participate in activities can be viewed through the lens of various different theories. For instance, social networks analysis and behavior has viewed the need or desire to participate in activities as stemming from the fact that we are social beings with a need to feel belonging (Salomon 1985). Some activities can be broken into those required to sustain basic life (such as work, or obtaining groceries or food), which might be motivated differently than other activities such as social or entertainment instances. Additional theories have been used to describe the motivation and behavior observed in time use and activity participation. Bourdieu's theory of distinction has been used for instance to describe observations and explain the reasoning for the ways in which individuals conduct their lives (Goulias and Yoon 2011). More recently, subjective well-being (SWB) and happiness have gained momentum in discussions of travel behavior and the related decisions surrounding activities and travel. Satisfaction with an episode of travel, of a specific mode, or the choice of an activity or time use can be viewed within the theoretical framework of well-being. SWB is commonly defined as an individual's evaluation of their quality of life. SWB is thought to be composed of three components: life satisfaction (as a whole), satisfaction with specific areas of life (family, work), and satisfaction, emotions, or feelings associated with episodes of life (Diener 2000). Traditionally, two distinct positions have been presented on the nature of SWB: the hedonic approach, in which SWB is seen as the pleasure gained through meeting preferences, and the eudaimonic approach in which pleasure is experienced through aspects such as excellence or virtue (for an overview of these, see De Vos et al. 2013). A review of recent applications of SWB in travel behavior can also be found in De Vos et al. 2013 in which it is also noted that most appearances of well being in travel behavior are based on hedonic views.

The use of SWB in travel behavior presents great potential for furthering the sophistication of modeling efforts. Some have utilized SWB theory in models of choice, employing aspects of happiness and therefore satisfaction in the utility of a decision being made (Polydoropoulou et al. 2010). Ettema et al. (2010) however, discuss the possibilities of using subjective well being as an alternative framework to the traditionally used utility theory, as another possible way to statistically express the fulfillment an individual experienced by a choice that he or she made (experienced utility rather than decision utility).

Regardless of the manner in which SWB is applied within the decision making framework, it is obvious that the theoretical contributions of SWB in understanding the motivations of decision making are strong. SWB theory can aid our understanding of the important attributes of a choice that contribute to a positive episodic experience and therefore a gain in well-being and happiness.

This discussion is rich, but characterized by large gaps in our knowledge and ability to decipher the complexities of human behavior. There are many attributes that can contribute to an individual being satisfied with the choice made. Although these decisions related to travel can range from mode choice, to time use, to destination choice, for the sake of the research in this paper, the conversation will be restricted to destination choice. The selection of one destination over another can be viewed as the individual seeking to gain

the most positive experience and well being from the episode. However, it is important to explore: (1) what aspects of destinations might contribute to happiness; (2) whether we can measure meaningful geographic differences in these subjective attitudes of a person's evaluation of space; and (3) under what circumstances these destination attributes matter. Although destination choice models have become increasingly sophisticated (with the inclusion for instance of planning and time horizons (Auld and Mohammadian 2011), or the addition of preferences (Swait and Ben-Akiva 1987; Ben-Akiva and Boccara 1995), there is still a lack of research connecting peoples affective evaluations of places, their destination choices, and the resulting emotional gain. It is the goal of this research to explore the feasibility of measuring subjective attitudes of places, and understand when these attributes matter in decision-making. This research also contributes to the field in exploring the spatial context of well-being which is virtually absent in travel behavior (exception to this is work from Delbosc and Currie (2011)) and is very critical to the framework of destination choice modeling which is often used in travel demand modeling.

In order to accomplish these goals, several analyses are included in this paper. First, a series of mapping questions from a web-based survey are used to examine several subjective aspects that could be considered in destination choice. These are thought to contribute to the satisfaction of activity experience, and will be examined geographically. Second, the importance of these aspects on destination choices as a whole (rather than for a specific activity type) is explored. Finally, the stated importance of several aspects (both subjective and objective) is analyzed for different activity types. All three of these analyses are conducted using data collected using a survey that will be further described in the following section.

Data description

The data used in this analysis are a portion of the data collected from a survey of the residents of the southern portion of Santa Barbara County, California. This area includes the cities of Santa Barbara, Goleta, as well as the Census-designated places of Montecito, Isla Vista, Mission Canyon, Mission Hills, Summerland, Toro Canyon and additional unincorporated areas. The sample consisted of 561 respondents. Sample statistics are provided in Table 1. It must be noted that this survey was initially a random sample based recruitment to households within the study area, but due to the web based nature and selection of respondents ages 18 and above, the resulting sample is not a representative sample of the population (county level population statistics are also provided in Table 1).

Survey instrument

The web-based GeoTRIPS (***G**eography of **TR**avel, **I**nterests, **P**laces and **S**ocial ties*) survey was conducted during the period of May 2012 through July 2012. The survey consisted of two waves of data collection, each lasting for one month. Recruitment was primarily by mail, with a very small portion of the resulting sample being recruited by email. The mail recruitment consisted of an initial recruitment letter, followed up by a reminder postcard. The survey consisted of several sections of content. Sections pertinent to this study include a mapping exercise, a section on decision making related to destination choice and a section on socio demographics. Each part of the survey will be described further in the following sections of this paper.

Table 1 Sample statistics (county data source: US census)

Variable	County wide statistics	Sample statistics
Gender	Female: 49.8 %	Female: 57.6 %
Years in house		Mean: 9.67
		SD: 7.84
Age	Median: 33.6	Median: 49 years
Household income	Median: $61,896	Median: $50,000–59,999
	<$10,000 5.00 %	Distribution:
	$10,000–$14,999 4.50 %	<$10,000 5.88 %
	$15,000–$24,999 9.20 %	$10,000–$19,999 4.63 %
	$25,000–$34,999 9.10 %	$20,000–$29,999 4.99 %
	$35,000–$49,999 12.80 %	$30,000–$39,999 8.2 %
		$40,000–$49,999 8.73 %
		$50,000–$59,999 9.27 %
	$50,000–$74,999 18.60 %	$60,000–$69,999 8.91 %
	$75,000–$99,999 12.10 %	$70,000–$79,999 13.37 %
	$100,000–$149,999 15.40 %	
	$150,000–$199,999 6.70 %	$80,000–$89,999 4.81 %
	$200,000 or more 6.70 %	$90,000–$99,999 4.46 %
		$100,000–$109,999 5.7 %
		$110,000–$119,999 2.14 %
		$120,000–$129,999 2.5 %
		$130,000–$139,999 1.78 %
		$140,000–$149,999 2.14 %
		≥$150,000 12.48 %
Households with 1 or more children	33.9 %	25.1 %
Household members	Mean: 2.86 persons	Mean: 2.69 persons Standard deviation: 1.26
Size	190,000 (study area), 423,895 (county)	561

Analysis

Mapping of destination attributes

Survey instrument

For this portion of the survey, respondents were asked to respond to four statements on a likert-like scale of strongly disagree (−3) to strongly agree (3) with respect to specific predefined areas of Santa Barbara. Figure 1 provides a screenshot of the survey instrument for this portion of the survey. The first part is the survey as displayed initially for each respondent, and second screenshot is an example of a respondent scoring each hexagon, with the map zoomed in (the map was enabled with panning and

zooming features). Following prior research in cognitive regions and spatial knowledge (Aitken and Prosser 1990; Montello et al. in press), a regular hexagonal grid pattern was used to canvass the study area in this research. Each hexagonal area measured 4 km in diameter. The size of each hexagon was determined by evaluating the trade-off between high levels of spatial aggregation, and higher respondent burden caused by a smaller hexagon scale. The use of alternative methods of dividing the study area was considered (such as natural boundaries or census designed divisions), however these did not meet our objectives of having a continuous (without holes of coverage) and regular division of space. Hexagons were chosen to tessellate the space over triangles or squares in order to avoid any directional bias or hard edges introduced with other shapes.

The four questions asked of each respondent were:

- This is an attractive area of Santa Barbara
- This is a dangerous area of Santa Barbara
- This area provides me with a lot of opportunities to do things I like to do
- I am very familiar with this area of Santa Barbara

In addition to the mapping exercises, at the end of the section of mapping exercises, respondents were asked to answer the following question:

"On a scale of 1–10, with 1 being not important and 10 being very important, please rate how important each of these aspects are in deciding whether to travel to a specific place for an everyday activity (shopping, eating out, meeting friends, family outing, etc.)?

- Proximity to home
- Perception of danger
- Attractiveness of the area
- Familiarity with the area
- Provides a lot of things to do"

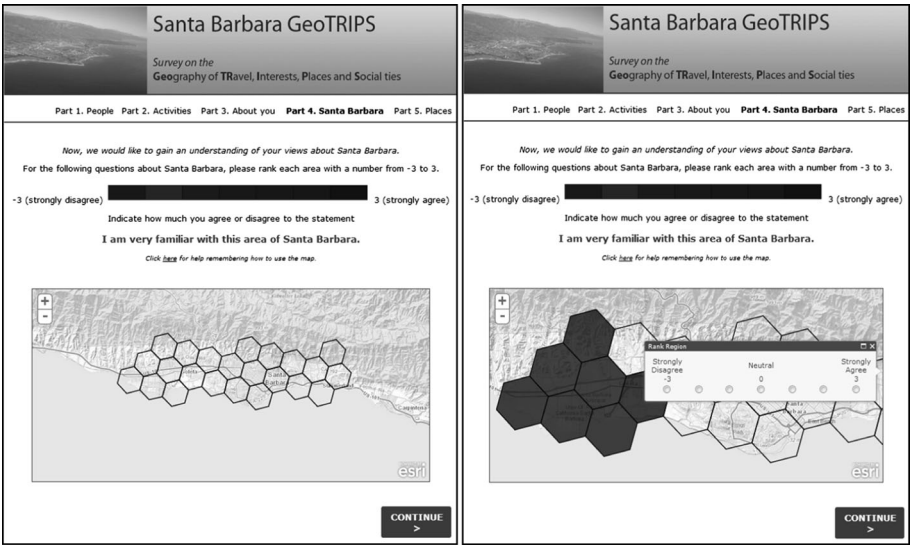

Fig. 1 Hexagon mapping exercise

Though none of these attributes ask the respondent directly about his or her perceived happiness of each of these geographic regions, it is our goal to explore the potential of developing a "happy places" index and surface that is a compilation of various place attributes that contribute to an attraction, and positive experience at a destination. This will allow for the development of hotspots of attraction for demand modeling purposes. This work can be situated in the existing literature in environmental psychology for instance in work on affective appraisal, which connects places with feelings ranging from safety to arousal (see for example Russell and Lanius 1984; Wong and Domroes 2005). Although there is work that exists on types of activities that induce happiness (see for example Csikszentmihalyi and Hunter 2003), and even the types and attributes of places that become favorite places (Newell 1997) and work exploring what attributes of places lead to attachment (for instance Beckley et al. 2007), there is little work linking the selection of destinations and the choice process to the happiness expected from conducting that activity at that location. Additionally, much of the work that has been conducted in subjective well being and happiness focuses on how individual activities contribute to an overall life satisfaction and happiness, rather than a focus on the episodes of the activities themselves (with notable exceptions Archer et al. 2013; Ravulaparthy et al. 2013).

For reference purposes throughout the rest of this analysis, a map of the study area, with each of the hexagons numbered is provided in Fig. 2.

Analysis and results

Hexagon scores To understand the views of Santa Barbara residents with respect to each of the four attributes, the data were examined in multiple ways. First, a geographic analysis of the means and standard deviations was conducted by visualizing the attribute values for each hexagon. Figure 3 a–d provides one map for each attribute measured. Means of each hexagon responses are provided using colors ranging from light (low) to dark (high) means. In addition, standard deviations for each of the hexagons are signified by the size of the circle within each hexagon. Table 2 provides a list of the minimum and maximum hexagon means and standard deviations that occur for each attribute, as well as the range of these values.

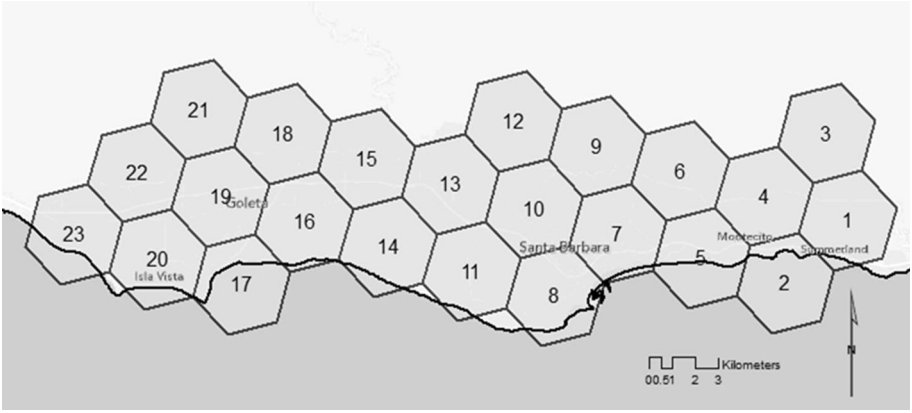

Fig. 2 Study area and hexagon numbering

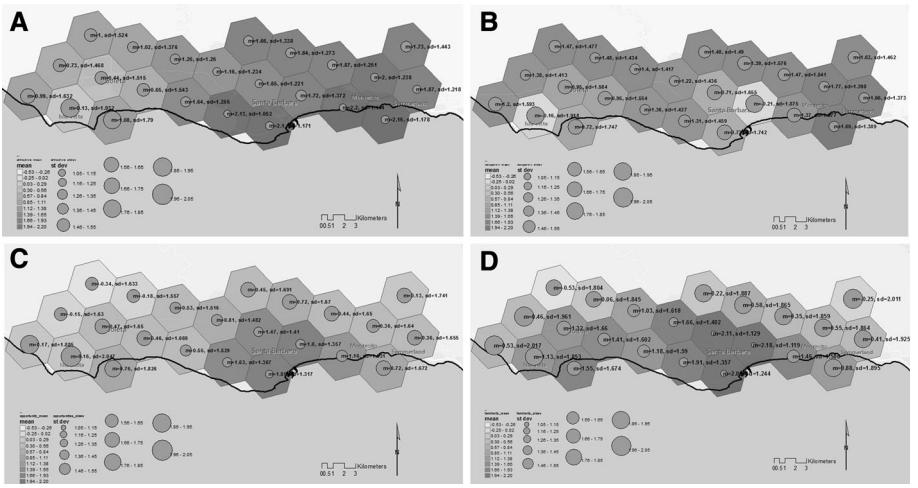

Fig. 3 Means and standard deviations of attributes (**a** attractiveness, **b** perception of danger*, **c** opportunities, **d** familiarity). *values perception of danger has been inverted from the original question to maintain consistency in coloring of positive and negative aspects

Table 2 Attribute minimum and maximum means and range

	Attractive		Danger inverse		Opportunity		Familiarity	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Min	0.127	1.052	−0.210	1.373	−0.345	1.317	−0.528	1.119
Max	2.199	1.932	1.770	1.918	1.850	2.047	2.176	2.017
Range	2.071	0.880	1.980	0.545	2.195	0.730	2.704	0.898

Attractiveness

As seen in the map (Fig. 3a), the overall attractiveness rating for each hexagon is consistently high for all hexagons in the study area on the scale of all attribute averages. Of the four attributes, this is the only one in which there is not an appearance of a negative mean for any of the hexagon regions (signifying disagreement with the statement). Although the values are on the higher range of values, there is a geographic trend that is observed from west (Goleta) to east (downtown Santa Barbara, Montecito and Summerland). The standard deviation of responses for these hexagons is also smaller than standard deviations of other attributes. Like the mean values for the overall attractiveness, the standard deviation values are larger in the Goleta area as opposed to the city of Santa Barbara. The lowest hexagon value for the attractiveness attribute is the area that encompasses the UC Santa Barbara campus and Isla Vista. Isla Vista is the likely reason for this lower value, as it is a college town (often called a student ghetto) with high density of apartment complexes and known for the party atmosphere and college lifestyle.

Perception of danger

The values for perception of danger were recoded with inverse values to be consistent with the other three attributes (positive values being a positive view towards that hexagon). The values for the perception of danger exhibit some extremes for both low values for means, and high values for the standard deviation, as seen in Fig. 3b. Notably, two hexagons (Isla Vista in the Goleta area- hexagon 20 from Fig. 2, and the downtown/lower East side of Santa Barbara-hexagon seven) have very low values (−0.16 and −0.21 respectively). This result might be consistent with the perception of these areas having higher crime rate reports and correspond to university students (more specific to hexagon 20) and lower income Santa Barbara residents. There is also some gang activity that is associated with areas of downtown Santa Barbara, specifically from the lower Eastside and lower Westside, and controversial legal discussions such as gang injunctions (see Magnoli 2011; Bush 2013). It is important to note however, that although these two hexagons received the lowest rating for being safe, the standard deviations of these two regions are the highest. This indicates that there is a large discrepancy of the perceptions of the danger attribute. In addition, the standard deviations for the values of perception of danger are higher on average than for other attributes (although the highest value across all attributes do not occur here). The areas that have the most positive values regarding danger (the darkest blue hexagons) are all located in areas that are highly residential in land use, and have lower densities, with mostly single-family houses. These areas are also areas where there is a lower discrepancy with respect to respondent views of the danger. All of the residential areas within the northern region of the study area, as well as the western and eastern areas are all very similar, with only a small increase in the mean in the eastern portion (the Montecito area).

Opportunity

The perception of opportunity values (Fig. 3c) shows the strongest geographic pattern, with the downtown and surrounding hexagons having the highest perceived opportunities. These also have some of the lowest values of standard deviations. Interestingly, hexagons containing additional shopping centers in Santa Barbara do not appear as being areas that are perceived to have a lot of opportunities, despite the presence of several retail and dining establishments. This is likely due to the fact that the shopping center houses many stores like Costco and Kmart, which might be more of the necessity type of shopping instances rather than the opportunities that a person "likes to do" as phrased in the survey question. Further analysis is necessary to examine the relationship between business types, density of businesses and therefore opportunities, and the perception of opportunities seen here. Though this is an interesting and much needed area of research, for this specific study and the manner in which this map data was collected, the objective of this much detail of opportunities was not included. Decision criteria for different types of activities (shopping, entertainment, dining, etc.) which is the focus of the next section was not included in the hexagon mapping exercise. Including each activity type as an individual map would lead to severe respondent burden and is not feasible.

Familiarity

The familiarity map (Fig. 3d) of regions of Santa Barbara shows the widest range of values (between −0.53 to 2.18). These values also have the highest standard deviations on average (1.69). The geographic pattern of the familiarity of regions is to be expected, with the downtown region being the most familiar, with the lowest standard deviation, and the

northern regions being the least familiar. This is also true for the extreme west and east regions of the study area (Goleta and Summerland). The familiarity averages also have the largest range of values for the standard deviation as reported in Table 2. Interestingly, the areas of lowest familiarity (areas that are almost neutral, or even in disagreement with the statement of being familiar with the area) correspond to areas of low perceived danger. This finding poses some interesting questions regarding the information used to evaluate these areas as safer than others, and whether the fear of the unknown (given the lack of familiarity) is different in different environments (urban versus suburban for instance). These low familiarity areas also do not have any obvious correlation to higher standard deviations of the other attributes, which one might expect. The hexagons with low mean values for familiarity tend to have standard deviations for attractiveness, perception of danger and opportunities that are in the middle range of the standard deviation scores. We believe that this might be due to the perception of these unfamiliar areas as primarily residential areas, which might warrant a range of "middle of the road" values from respondents, and not elicit strong views toward an extreme value.

Aspect importance

In order to understand the importance of each of these aspects to an individual, respondents were asked to indicate the level of importance that each aspect has in decision-making. This weighting of importance gives some indicator of how much each attribute contributes to the satisfaction of an episode of an activity at a destination. In addition to the four aspects discussed above, proximity to home was also included in the list of destination choice considerations. Table 3 provides the mean (on a one through ten scale) and standard deviations for the importance that each respondent places on each of the five aspects for destination choices. The frequency of responses for each value of importance is also reported in Fig. 4. The means for each attribute indicate that the highest rated criteria are the attractiveness (7.73), followed by the opportunities that are available in that area (7.5), with the average for proximity to home (7.49) very close behind. Perception of danger was ranked lowest of the criterion with a mean of 6.31. Interestingly, however, the perception of danger has the highest standard deviation of all criteria (3.095), showing a larger discrepancy among individuals as to how important this attribute is. Proximity to home has the second highest standard deviation. An analysis of the frequencies for each criterion shows that perception of danger has the highest frequencies for the one through four values (out of all the criteria, it is most often found to be of low importance), but it also maintains the highest number of respondents who ranked it with an importance of ten. The attractiveness and the opportunities of the area have the lowest standard deviation for attribute importance (1.875 and 1.972 respectively), and both have low numbers of respondents who rated these attributes of very low importance (values of one through four), and a peak at a value of eight for both. Women tend to rate all attributes higher than men in importance, with a noticeable difference (nearly one point) for the perception of danger. Additionally, the percentage of women who rate the perception of danger as a 10 in importance level is substantially higher than all others.

Measures of weighted attraction

Building from the regional rating of places regarding the four attributes, and the evaluation of importance of these aspects in destination choice, an importance based measure of attractiveness for each hexagon was developed. In doing this, not only are we able to

Table 3 Attribute importance mean and standard deviation

	All respondents		Females (n = 323)		Males (n = 238)	
	Mean	SD	Mean	SD	Mean	SD
Attractiveness of the area	7.73	1.875	7.91	1.90	7.50	1.81
Perception of danger of the area	6.31	3.095	6.83	3.14	5.60	2.89
Area provides a lot of things to do	7.5	1.972	7.64	1.96	7.31	1.97
Familiarity with the area	7.27	2.185	7.46	2.18	7.01	2.17
Proximity to home	7.49	2.205	7.62	2.21	7.32	2.19

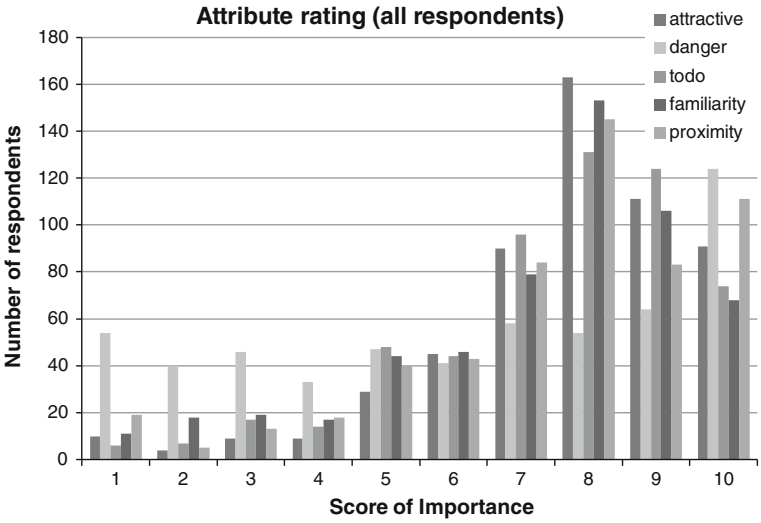

Fig. 4 Attribute importance rankings

develop a more individualized value for each attribute, we are also able to develop an understanding of how or if a certain geographic area meets the standards of an individual and the criteria he or she has for enjoyable, quality destinations. First, the raw survey values for each hexagon were recoded on a one through seven scale to avoid negatives and more importantly any zeros in the calculations. Using these recoded values, an average attraction for each hexagon for each attribute was calculated using Eq. 1.

$$AV_{ij} = \frac{\sum_{k=1}^{n} \left(x_{ijk} w_{jk}\right)}{n}, \tag{1}$$

where $i = 1,\ldots, 23$ (number of hexagons shown to respondents). $j = 1, 2, 3, 4$ (for attractiveness, danger, opportunity, familiarity respectively). k = 1,…, n (n = 561) AV_{ij} is the average of the specific attraction variable of hexagon i for attribute j x_{ijk} is the hexagon (i) specific response by individual k to the likert ranking of each attribute j w is the weight of attribute j for each individual k (constant across each hexagon).

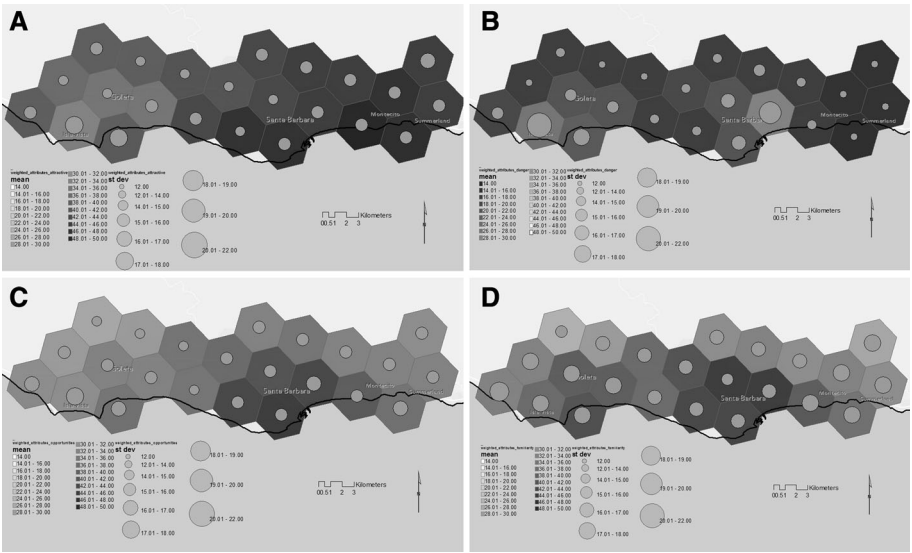

Fig. 5 Weighted attribute surface (**a** attractiveness, **b** perception of danger, **c** opportunities, **d** familiarity)

In this way we obtain 4 values of weighted attributes averaged over all respondents for each of the 23 hexagons.

The results of the average attraction for each attribute are visualized in Fig. 5 (a–d). It should be noted that in order to remain consistent for visualization purposes the danger surface is shown with a reversed color scale. The values for this attribute were not inverted prior to the transformation in order to preserve the original meaning of the question and consistency between the scoring of hexagons and rating of importance. Additionally, the resulting values should be interpreted opposite of the other three attributes; a higher value means the area is more dangerous and therefore viewed negatively. Because of this, interpretation of this map and comparisons to the other three attribute maps should be done with caution, as these values are now values of detraction, and the magnitude of the value has different meaning. As it would be expected, the trends exhibited in the weighted attribute surfaces show some similarities to the averaged raw numbers for each attribute means. When examining the weighted surfaces, the attraction that is caused by the overall attractiveness of an area has the highest mean values and some of the lowest standard deviations across all attributes. The average values for each of the hexagons across this feature are also fairly consistent. This is consistent with both the low standard deviations of the attractiveness raw scores for each hexagon (as seen in Fig. 3a) and the low standard deviation for the importance that the attractiveness aspect has on destination choice. The lack of attraction, or higher detraction potential, due to the perception of danger is again seen highest in the downtown and UCSB/Isla Vista areas, with the highest standard deviations of the 23 hexagons for this attribute. With the exception of these two hexagons (and a few surrounding hexagons to a small extent), the average and standard deviation values for each hexagon are very similar. The means for the opportunities attraction are lower than those of the attractiveness attribute, and similar to the values for familiarity. The standard deviations for the opportunities attraction surface however are also lower

Table 4 Weighted attribute mean minimum, maximum and range

	Attractive		Danger		Opportunity		Familiarity	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Low	32.039	14.188	14.941	13.111	27.670	14.169	25.178	15.676
High	48.246	17.576	28.112	20.132	44.086	17.952	44.784	18.314
Range	16.207	3.387	13.171	7.021	16.415	3.783	19.606	2.637

than the familiarity attribute, and similar to the attractiveness. This indicates that there is a higher level of agreement among respondents about where activities locations are. As a result of the weighting, the familiarity aspect no longer has the largest range of values for the standard deviation. The perception of danger has a much larger range (7.021) of standard deviation values when compared to the other three (Attractiveness: 3.387, Opportunities: 3.783, and Familiarity: 2.637), as reported in Table 4. The familiarity attraction surface as expected identifies the areas of eastern Goleta eastward toward the downtown area of Santa Barbara as having a higher attraction potential. This is likely a product of the residential locations of the respondents.

Following the creation of the attraction by each attribute, a combined attraction surface for the hexagon regions was created. First, the individual components of Eq. 1 were used to calculate attribute attraction indices for each hexagon and attribute for each respondent (given in Eq. 2).

$$AI_{ijk} = x_{ijk} w_{jk}, \tag{2}$$

where $i = 1,\ldots, 23$ (number of hexagons shown to respondents). $j = 1, 2, 3, 4$ (for attractiveness, danger, opportunity, familiarity respectively). $k = 1,\ldots,$ n (n = 561) x is the attribute score from strongly disagree to strongly agree, rescaled on a 1–7 scale and w is the importance of that attribute in the decision process

Next, a composite index of attraction was computed and averaged across all respondents. The overall attractiveness, familiarity and opportunities were all deemed as positive attributes and were summed, while the perception of danger was deemed a negative attribute of the region and was subtracted from the overall score (a higher value for this attribute indicates agreement with that region being more dangerous).

$$I_i = \frac{\sum_{k=1}^{n} \left(x_{i1k} w_{1k} - x_{i2k} w_{2k} + x_{i3k} w_{3k} + x_{i4k} w_{4k}\right)}{n}, \tag{3}$$

where I_i is the overall attraction index i and k are the hexagons and respondents respectively, as defined above x is the attribute score from strongly disagree to strongly agree w is the importance of that attribute in the decision process and j from Eq. 2 is replaced with specific attribute numbers 1 = attractiveness, 2 = danger, 3 = opportunities, and 4 = familiarity

The resulting attraction surface of this calculation can be seen in Fig. 6. As seen in the figure, the western portion of Santa Barbara (downtown Santa Barbara and Montecito) has a higher attraction compared to the eastern portion (Goleta). Additionally, the coastline (with the exception of the UCSB/Isla Vista- hexagon 20) tend to have higher values than do the inland hexagons, and there is a slight trend of more attraction following State Street, which is one of Santa Barbara's main arterial streets, with many retail stores, restaurants, and other services.

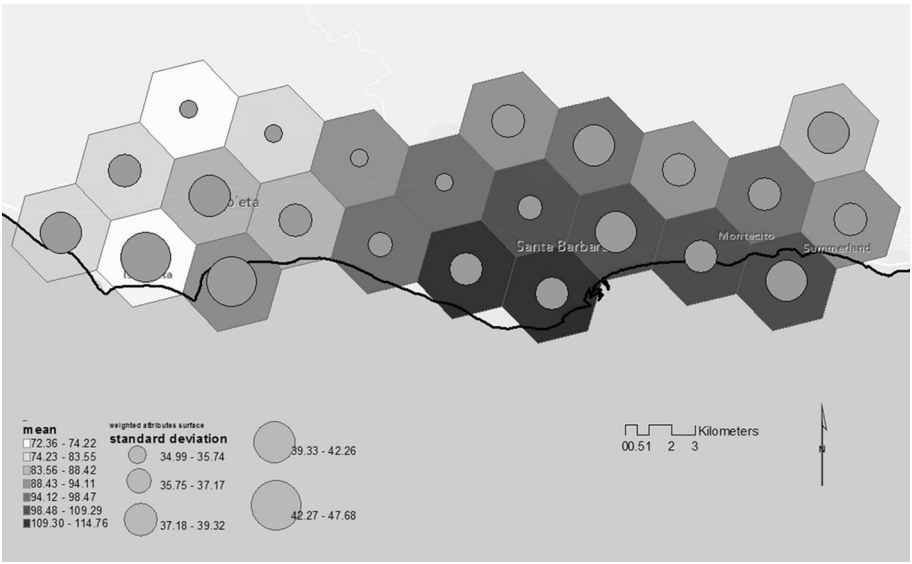

Fig. 6 Attraction surface

From the analysis, a clear spatial pattern of subjective attitude and their associated weight emerges as a potential decision making criterion in destination choices of survey respondents. However, this analysis only reflects the overall attitudes towards these places, and the potential that these destinations have in creating an environment for a happy experience. These results do not consider the importance of context, service and offerings of these destinations, which are very critical in activity participation. To further explore this concept of fulfilling an activity type based on offerings at the destination, we utilize the second portion of the survey as discussed in the previous section.

Activity type and criteria

Survey instrument

The second portion of the data collection used in this research asked survey participants to respond to whether different aspects matter to them in the selection of a destination for a series of activity types. These activity types included grocery shopping, other shopping, activities with family, outdoor recreation, social activities, eating out, and entertainment. The questions iterated through each of the seven activity types, and responses were on a seven point likert-like scale from strongly disagree to strongly agree The attributes and the code (signified in quotations) that they are referred to throughout this analysis are:

- Cost of goods or services at the place—"cost"
- Whether the place is a good reflection of the type of person I am—"identity"
- The quality of the products or services offered—"quality"
- Whether the place has a positive social atmosphere—"social"
- How much time it will take me to travel to the place—"traveltime"
- How well the place reflects the Santa Barbara lifestyle—"culture"

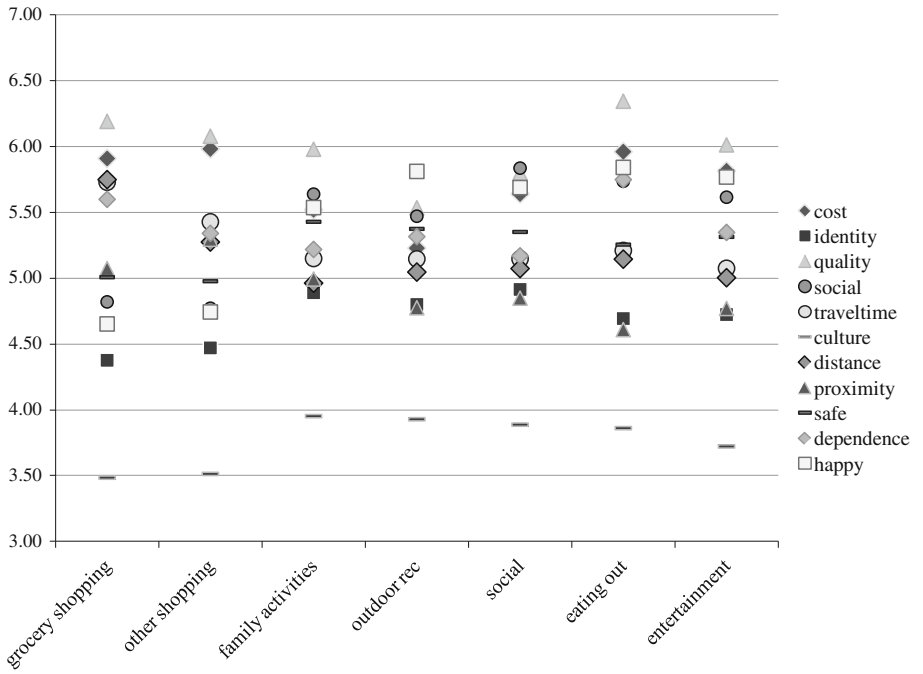

Fig. 7 Attribute importance by activity type means

- How close the place is to my home—"distance"
- The safety of the surrounding area—"safe"
- If there are other places close by where I can do other activities—"proximity"
- Whether the place meets all my [fill in the activity type] needs—"dependence"
- Whether the place makes me feel happy—"happy"

Analysis and results

A graph of averages of each of the eleven "qualities" for all seven types of activities is presented in Fig. 7. It must be noted, that due to the fact that no attribute/activity combination had a mean score of less than three, the "Y" axis is truncated to better visualize the data. It is apparent in this exploration that certain aspects (such as the place reflecting the Santa Barbara lifestyle, termed culture), have lower importance for all activity types. There is still an interesting trend however between the two shopping activities and all others, where the reflection of Santa Barbara matters more for other activities. This is a similar case for aspects such as the reflection of a person's identity (termed identity), the social atmosphere being positive (termed social), and in a much more exaggerated way the happiness elicited by the place (termed happy). On the other side of the importance scale, the quality of products and services has much higher values, and is more consistent across all activity types.

In order to more completely explore the trends/variation in the data, we treat the dependent or the latent variable (activity types) as categorical in our analysis. For this

purpose, we employ multinomial logistic (MNL) regression estimation to study individuals' activity type correlation with significance and importance of each of the destination choice attributes like safety, happiness, travel cost among others.

The structural model specification is given as

$$U_{ij} = \alpha_j^{'} + \beta_j^{'} x_{ij} + \gamma_j^{'} z_{ij} + \varepsilon_{ij}, \tag{4}$$

where U_{ij}—is the utility of an individual i ($i = 1, 2, \ldots, 561$) to participate in an activity type j α'_j—is a vector of constants to be estimated for each activity type j, where $j =$ grocery shopping, other shopping, family activities, outdoor recreation, social activities, eating out and entertainment x_{ij}—a vector of explanatory variables describing the importance of objective measures of a destination like travel cost, time and distance for an individual i to participate for an activity type j z_{ij}—a vector of explanatory variables describing the importance of subjective measures of a destination like happiness, identity and safety for an individual i to participate for an activity type j ε_{ij}—a random error term of type-1 extreme value or logistic distribution β_j γ_j,—a vector of regression coefficients to be estimated.

The model parameters α, β and γ are estimated using the maximum likelihood estimation techniques as for the MNL model specified in Eq. 4 (Green 2007). We also note that as part of this analysis the activity types vary for each person when deciding on the importance of the destination choice attributes.

The results of this model are presented in Table 5, with the base activity type being entertainment activities. It should be noted, that this model is not a model of observed destination choice, but rather a model that statistically describes significant attributes associated with the selection of a destination for each type of activity. The dependent variable in this model is each of the activity types, and the indicators are each attribute (safety, happiness, cost, etc.). In this model, there are 3847 observations (responses from each of the 561 respondent for all activity types, although not all respondents responded for activities with family members). It should also be noted that similar models were estimated accounting for the repeated nature of observations (one respondent with several different activity types), or clustering, but the results were very similar to this simplified model. Overall, the evaluation of the happiness of a place is significant in all activity types with the exception of eating out (although it is almost significant at a.1 level). It makes sense that happiness would be less important for shopping activities when compared to entertainment activities, but it is somewhat surprising that it has a negative coefficient for activities involving family time. Perhaps this is because of the fact that entertainment could be viewed as an activity undertaken completely for one's own satisfaction, while family time is for others as well, where there might be a satiation effect in satisfaction often leading to tiredness as noted by Goulias et al. (2013). Also of note is the fact that measures such as distance from home, travel time, cost of goods or services or proximity to other activity locations are not found to be significant as criteria for activities that are social in nature. This research shows that current measures of accessibility and objective measures of place attraction may not be utilized in all decisions being made for destination choices. This challenges current methods and illustrates that the subjective measures of places are important in destination choice. Although time and money are important, these findings illustrate that people make choices to gain in other areas, such as satisfaction and happiness, which cannot be as easily incorporated.

Table 5 Multinomial logit model of activity attributes in destination choice

	Grocery shopping		Other shopping		Family activities		Outdoor recreation		Social activities		Eating out	
	Coef	Wald	Coef	Wald	Coef	Wald	Coef	Wald	Coef	Wald	Coef	Wald
Intercept	−1.233	5.924 *(.015)*	.001	.000 *(.999)*	.384	.666 *(.414)*	1.480	11.227 *(.001)*	.347	.599 *(.439)*	−2.607	25.970 *(.000)*
Cost	−.137	4.726 *(.030)*	.064	.979 *(.323)*	−.233	16.460 *(.000)*	−.325	34.567 *(.000)*	−.080	1.950 *(.163)*	.008	.020 *(.889)*
Identity	.076	2.056 *(.152)*	.115	4.845 *(.028)*	.086	2.762 *(.097)*	.088	3.029 *(.082)*	.078	2.563 *(.109)*	−.080	2.916 *(.088)*
Quality	.488	34.638 *(.000)*	.363	20.623 *(.000)*	.075	.941 *(.332)*	−.383	30.155 *(.000)*	−.317	19.510 *(.000)*	.418	26.633 *(.000)*
Social	−.373	31.396 *(.000)*	−.449	45.701 *(.000)*	.097	1.706 *(.191)*	−.077	1.295 *(.255)*	.437	33.799 *(.000)*	−.009	.019 *(.890)*
Traveltime	.318	14.477 *(.000)*	.274	11.884 *(.001)*	.145	3.662 *(.056)*	.147	3.946 *(.047)*	.020	.076 *(.783)*	.056	.601 *(.438)*
Culture	.070	2.130 *(.144)*	.067	1.993 *(.158)*	.043	.913 *(.339)*	.011	.061 *(.804)*	−.001	.000 *(.984)*	.117	7.175 *(.007)*
Distance	.312	14.200 *(.000)*	−.139	3.192 *(.074)*	−.168	4.992 *(.025)*	.006	.007 *(.932)*	.048	.438 *(.508)*	.049	.463 *(.496)*
Proximity	.189	10.068 *(.002)*	.554	74.863 *(.000)*	.217	3.251 *(.000)*	−.001	.000 *(.989)*	.089	2.538 *(.111)*	−.214	16.880 *(.000)*
Safe	−.260	26.626 *(.000)*	−.253	25.465 *(.000)*	.076	2.166 *(.141)*	.096	3.640 *(.056)*	.019	.152 *(.696)*	−.110	5.487 *(.019)*
Dependence	.273	20.463 *(.000)*	.091	2.413 *(.120)*	−.096	2.967 *(.085)*	.041	.564 *(.453)*	−.138	6.742 *(.009)*	.291	27.527 *(.000)*
Happy	−.769	136.749 *(.000)*	−.698	113.071 *(.000)*	−.293	18.261 *(.000)*	.170	6.070 *(.014)*	−.182	7.247 *(.007)*	−.104	2.403 *(.121)*

McFadden R^2 0.11, −2 log likelihood (full model) is 13718.54, −2 log likelihood (intercept model) is 12050.63, n = 3847

Significant values are in italics

Conclusion

Through the analyses presented in this paper, we have been able to identify important concepts of decision making related to activity patterns and subjective well-being. The psychological and emotional aspects of a destination have been shown to be at times equally or even more heavily influential on decisions of destinations than objective measures such as cost, time and distance. In the first portion of the study, we were able to create an individualized index of attraction for four different aspects of place. These aspects, attractiveness, opportunities available, familiarity, and perception of safety can be used as a basis for the development of a heat map like surface of attraction. The weighted scores by individuals provide not only an analysis by the respondent of his or her views of the region, but also the degree to which that aspect matters. The second portion of this study further refines the concepts presented in the first portion, and examines various types of activities more specifically. The findings of this analysis indicate the varying degree of importance in decision-making. This indicates that individuals have different expectations and criteria to evaluate a destination, and therefore an activity episode. In order to more fully incorporate subjective well-being as a motivator for activities and travel behavior, we must first realize that different criteria are used in choosing a place for the activity.

Although we do not explore the impact of socio-demographics on the attribute and importance, we should consider how a person's life situation impacts these views. Further research is necessary to explore this data from a person-by-person perspective, rather than an aggregate activity type and geographic region. Additionally, it is important to note that there are additional aspects that are important in the development of episodic well-being and happiness from activity and destination choice. Currently, the development of accessibility measures is used to understand and predict human movement and behavior. In creating these indicators however, there is a strong possibility that human preferences and actual behavior is misrepresented. Utilizing a combination of quantifiable aspects such as transportation network infrastructure, travel time and the availability of opportunities assumes that all places are created equal from an emotional or psychological perspective, and that people are only motivated to travel for these aspects. Deciphering differences that exist across different places involves understanding both the differences that exist spatially, and the differences that exist across different persons. This research is meant as a starting point to challenge current approaches of evaluating space and assigning destinations for activities. Choice models and accessibility measures, although able to sophisticatedly incorporate some aspects of the destination choice process, still have a long way to go before they accurately represent the emotional influences on decision making. Incorporating aspects like happiness into the motivation of travel, and the aspects that are sought after to gain a positive experience with the destination is a first step.

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Kate Deutsch-Burgner is a Ph.D. graduate from the Geography Department at UC Santa Barbara. Her work explores destination choice, the decision-making process, and data collection methods. Post graduation, Kate began a startup company—Data Perspectives Consulting.

Srinath Ravualaparthy is a Ph.D. graduate from the Department of Geography at the University of California, Santa Barbara. He is currently working with Cambridge Systematics Inc., as a Travel Demand Modeler in areas of travel demand modeling and forecasting and land-use simulation methods.

Konstadinos Goulias is a professor of transportation at the UC Santa Barbara Department of Geography. He chaired the TRB Committee on Traveler Behavior and Values, edited two books, 260 research reports, and is editor of *Transportation Letters*.