

“Universalities in Choices of Beautiful City Destinations”

By

Gilbert H. Castle, III
Founder, CitiesBeautiful.org

Abstract

Millions of tourists annually are motivated to visit cities considered to be the most beautiful in the world. Two research questions arise: Do statistically consistent rankings of beautiful cities emerge when multiple opinion surveys are compared? Do the rankings differ to a statistically significant degree when disaggregated by salient demographic characteristics? While numerous past tourism studies have researched the importance of demographic variables, a paucity of research focuses directly on beautiful city tourism. To answer the two research questions, several worldwide surveys are analyzed that ask for rankings of the world’s most beautiful cities. The analyses reveal a remarkably high degree of statistical consistency in the rankings of beautiful cities (p -values ranging from .00321 to .00001). Contrary to previous research studies, almost no significant differences are found on the basis of numerous demographic characteristics. The findings offer tourism industry professionals specific, actionable guidelines for beautiful city-related marketing campaigns.

Keywords

Beautiful Cities Tourism, Beautiful Cities Tourism Marketing, Ranking Beautiful Cities, Visiting Beautiful Cities, Tourism Demographics, Beautiful City Destinations

1. INTRODUCTION

Though extensive grey literature exists on which cities the respondents to surveys say are the most beautiful in the world, rigorous research is lacking on whether there are notable consistencies in those surveys’ findings. For example, we might anticipate that any random group of people asked to name the world’s most beautiful cities would likely include Paris on the short list – but would they do so to a statistically significant degree? If the answer turns out to be “yes”, what other cities would predictably be on the short list, and how can that predictability be profitably utilized by the tourism industry?

Digging deeper, based on the extensive research literature on demographic differences in travel preferences, we might anticipate statistically significant differences in the choices of the most beautiful cities derived from the demographic characteristics of the survey respondents. That is, are there statistically significant differences in the rankings of beautiful cities based on characteristics such as gender, age, education, nationality, and personality?

The answers to these questions would not be trivial. Beautiful cities are of special importance to people everywhere, both to reside in and to visit. Past research studies on why beauty matters have identified at least four major reasons.

One reason is economics. Cities around the world have attempted to leverage public investments in leisure spaces and beautification to spur economic development (Carlino and Saiz 2008). An important component of any given city’s economic development program often is tourism.

Another reason is community satisfaction. A large survey of individuals across the United States confirmed that the perceived beauty or aesthetic character of a location was one of the strongest predictors of perceived community satisfaction, alongside economic security, good schools, and the perceived capacity for social interaction (Florida, Mellander, and Stolarick 2009). Similarly, a subsequent study found that place-based factors, in particular the perceived beauty and physical appeal of the location, explained more of the desire to continue living in that area than did community economic conditions or individual demographic characteristics (Florida, Mellander, and Stolarick 2011). Beautiful cities not only permit enjoyable aesthetic experiences for tourists, but may also inspire them to promote beauty in their home communities.

A third reason is each individual’s mental well-being, which can be enhanced by positive aesthetic experiences. For example, a survey of residents in ten major metropolitan areas across three continents found that happiness was positively associated with perceptions that their city was beautiful (aesthetics), as well as perceptions that the city was clean (aesthetics and safety) and safe to walk at night (safety) (Leyden, Goldberg, and Michelbach 2011). An English study, consisting of individual interviews, a series of focus groups, and a nationwide survey, found a strong consensus for striving for more beauty in neighborhoods, towns, and cities, and that beauty was judged to be particularly important for younger and future generations (Commission for Architecture and the Built Environment [CABE] 2020). Similarly, another

study of 18,966 streets and squares in the United Kingdom found that there are consistencies in the types of buildings that people find aesthetically pleasing and that these have a positive impact upon people's mental health and behavior, eventually concluding that "Beauty really really matters" (Iovene, Smith, and Seresinhe 2019, 76). Given that beauty affects one's sense of well-being in one's home city, arguably the same holds true when visiting beautiful cities elsewhere.

A final reason is the inter-connectedness between civic beauty and a person's deepest feelings. A systematic review of 140 qualitative studies published over the last 50 years concluded that every aesthetic response to the environment is derived from a communication between contemplative feeling, sensual desire, and an immediate state of involvement (Nia and Atun 2016). Similarly, from the foundational book *The Psychology of Beauty*, "The way is at last opened from the traditional philosophy of aesthetics to a healthy and concrete psychological theory...The beautiful object possesses those qualities which bring the personality into a state of unity and self-completeness" (Puffer 1905, 22). Visiting beautiful cities thus holds the potential for deeply moving experiences.

Beautiful cities do matter. Yet, as stated at the outset, little research has focused on two overarching questions on travel preferences:

1. Do statistically consistent rankings of beautiful cities emerge when multiple opinion surveys are compared?
2. Do the rankings differ to a statistically significant degree when disaggregated by often-researched demographic characteristics, such as gender, age, education, nationality, and personality?

This study looks to rectify that paucity of research by directly addressing the two questions. The answers to the questions will assist the tourism industry in deciding where and how best to utilize tourist segmentation marketing campaigns in preference to broad-brush marketing methods.

2. HYPOTHESES FORMULATION AND LITERATURE REVIEW

The study encompasses seven salient hypotheses. Since most of the seven have multiple sub-hypotheses, a total of 16 hypotheses and sub-hypotheses will be tested. In this section each will first be stated, followed by a discussion of relevant past studies.

***H*₁. Concerning surveys in which respondents are asked to name the world's most beautiful city...**

***H*_{1a}. Surveys will consistently show that respondents have statistically similar rankings of the world's most beautiful cities.**

***H*_{1b}. Surveys will consistently show that travel experts and the general public have statistically similar rankings of the world's most beautiful cities.**

In the academic literature, no previous studies have explored whether there are statistically significant differences in survey rankings of the world's most beautiful cities. Numerous surveys are available in the grey literature, comprised of two main types. Most common are rankings in travel magazines and websites in which the editorial staff develop the rankings themselves. Examples include Condé Nast's ranking of 50 cities (Morton 2019), U City Guides' (2020) ranking of 10 cities, Lonely Planet's ranking of 10 cities (Brard 2019), Forbes' ranking of 20 cities (Bloom 2016), and Harper's Bazaar's ranking of 19 cities (Marchant 2019). The other main type are rankings solicited in online surveys of the general public or travel experts. For example, surveys of the general public include the ranking of 135 cities by Ranker.com (Ranker Travel 2019), the ranking of 25 cities by CitiesBeautiful.org (2020), and the ranking of 14 cities by Rough Guides (Gross, 2015). Flight Network (2019) contacted more than one thousand travel experts (e.g. travel agents, hospitality professionals, bloggers) for their ranking of 50 cities.

These survey rankings all exhibit a conspicuous repetitiveness of numerous cities – Paris, Prague, Rio de Janeiro, Kyoto, San Francisco, Rome, and so on. We might reasonably anticipate that multiple random surveys would all have rankings that do not differ to a statistically significant degree. As a corollary, we might also anticipate that surveys of the general public would produce rankings that are statistically similar to those of travel experts. Hence, our working hypotheses are ***H*_{1a}** and ***H*_{1b}**.

***H*₂. The specification of the world's most beautiful cities differs significantly on the basis of gender.**

Gender has been and continues to be one of the most frequent types of segmentation used by tourism marketers. The majority of research studies have found that gender significantly affects how different tourist destinations are perceived, as the following examples demonstrate.

Numerous studies have identified gender differences in travel motivations. A survey of 396 residents in western Australia found that men were more likely than women to prioritize adventure, whereas women were more likely than men to prioritize destinations which allowed their families to be away from home and which presented opportunities for

purchasing unique native items or souvenirs. (Ryan, Henley, and Soutar 1998). A study of British tourists visiting Turkey found that male tourists preferred more recreation and activity in their destination, whereas the motives for female tourists tended to be based more on relaxation and escape (Andreu, Kozac, Avci, and Cifter 2005). Similarly, it has been found that female tourists tend to be more motivated by escape/relaxation, exploration, social relationships with family/friends, and appreciating famous sites/heritage, whereas male tourists (particularly in the younger age groups) tend to be more motivated by the prestige/impression of the destination (Jensen 2011). Gender differences in travel motivations for exploring new ideas and discovering new places were also identified in a study of tourists in Tanzania (Kara and Mkwizu 2020).

Gender affects the way in which travel destinations are perceived. An often-cited study of tourists in the Canary Islands showed that gender had a significant influence on both the affective and cognitive components of the image of the tourist destination. In particular, the results for first-time visitors showed that women tended to assess the affective image of the destination more positively than did men, and the results for repeat visitors showed that women tended to more highly value the 'sun and beach' dimension than did men (Beerli and Martín 2004).

Finally, it has also been demonstrated that there are gender differences with respect to the strategies used when evaluating travel destinations. One study into online travel website functionality and search behaviors, based on a sample of 1,334 respondents, found that when choosing travel destinations women attached significantly greater value to a wider variety of sources of information than did men (Kim, Lehto, and Morrison 2007).

Overall, therefore, the results highlight clear gender differences in travel preference and behaviors. However, it also worth noting that some other studies have found no statistically significant gender differences. For example, a study of tourists visiting Barbados found that male and female tourists did not differ significantly in their travel motivations (Jönsson and Devonish 2008). Similarly, a survey of 49,000 Australians found that gender did not have a significant effect on travel planning or travel choice for Asian and other overseas destinations (Kattiyapornpong and Miller 2007).

The test results for H_2 should contribute additional insights on whether females and males differ significantly in their destination preferences, in this instance, visiting the most beautiful cities in the world.

***H₃*. The specification of the world's most beautiful cities differs significantly on the basis of age, using three cohorts:**

***H_{3a}*. Under 30 years old compared to 30 to 49 years old**

***H_{3b}*. Under 30 years old compared to 50 years and older.**

***H_{3c}*. 30 to 49 years old compared 50 years and older.**

As with gender, studies examining travel preferences in relation to age often but not always report significant differences.

In terms of the studies which did find significant age-related differences, the aforementioned study of travelers to the Canary Islands found that older tourists tended to more positively rate the natural and social environment of the destination than did younger tourists (Beerli and Martín 2004). Similarly, the study of tourists in Barbados found that older tourists were more likely than younger tourists to have motivations for culture and relaxation, whereas younger tourists were more likely to want to engage in sports (Jönsson and Devonish 2008). The Tanzanian study demonstrated that younger tourists were more likely to be motivated by developing physical skills and abilities than older tourists (Kara and Mkwizu 2020).

Examples of studies in which age was not found to be a statistically significant factor include the previously referenced survey of 49,000 Australians, which found that age was not consistently related to travel planning or travel choice (Kattiyapornpong and Miller 2007). Similarly, the study of British tourists in Turkey found through multi-step cluster analysis that age had no significant influence on travel motivations (Andreu, Kozac, Avci, and Cifter 2005).

The current study will compare three age cohorts to bring increased clarity on whether age is a statistically significant factor in determining ranking of beautiful cities.

***H₄*. The specification of the world's most beautiful cities differs significantly on the basis of level of education, using three cohorts:**

***H_{4a}*. High-school degree or less compared to a college degree (e.g., B.A., B.S.).**

***H_{4b}*. High-school degree or less compared to a postgraduate degree (e.g., Masters, Ph.D.).**

***H_{4c}*. College degree compared to a postgraduate degree.**

The traveler's level of education is another characteristic which has previously been found to influence travel perceptions. For example, in the Canary Islands study, it was demonstrated that, amongst repeat travelers to the destination, the affective component of image formation was more positive for those with less formal education (Beerli and

Martín 2004). A study of cultural tourism in Europe concluded that the demand for heritage tourism has been fueled by rising income and education levels, suggesting that more educated tourists tend to prefer destinations with a rich cultural heritage (Richards 1997). Another study investigating travel motivation similarly found that two types of cultural attraction (festival/musical attractions and knowledge/aesthetic seeking attractions) were positively associated with income and education, whereas participation in commercial recreation parks was negatively associated with education (Kim, Cheng, and O’Leary 2007).

Other studies have found that education level has little impact. A study which used a sibling model to estimate the total impact of family background, including education, on cultural consumption found that the impact of educational attainment was relatively small (Van Eijck 1997).

Level of education has frequently been tied to other variables such as income. A “pure play” focusing solely on level of education is warranted. Increased granularity of findings should be achieved with H_4 by comparing three level of education variables.

H_5 . The specification of the world’s most beautiful cities differs significantly on the basis of nationality, as measured three ways:

H_{5a} . The language spoken by the individual.

H_{5b} . The number of countries in which the individual has lived.

H_{5c} . The continent in which the individual grew up.

Past studies more often than not have found that nationality is a statistically significant factor when analyzing and predicting tourists’ behaviors. For example, in a study of tourists visiting attractions on the Danish island of Funen, significant differences in travel motivations were found between nationalities, underscoring the value of a nationality-based segmentation strategy for tourist marketers (Jensen 2006). Similarly, the previously-mentioned study conducted in Barbados also found differences by nationality with respect to motivations for visiting the island (Jönsson and Devonish 2008).

Nationality-related differences are also evident to those working in the travel industry. In an investigation of British tour guides’ perceptions of the behavioral characteristics of Japanese, French, Italian, and American tourists, significant differences between the four nationalities were found for 18 of the 20 behavioral characteristics (Pizam and Sussman 1995). Similarly, 86 Korean tour guides responded to a questionnaire soliciting their opinions on 20 behavioral characteristics of Japanese, American and Korean tourists on guided tours; the results again indicated that for 18 out of the 20 behavioral characteristics there was a significant perceived difference between the three nationalities (Pizam and Jeong 1996).

However, the use of nationality as a sole discriminating variable for explaining the differences found in the behavior of tourists has been criticized on numerous grounds. Tourists can have multiple nationalities; their country of birth may be different than their country of origin or nationality; cultural differences exist between people with the same nationality (e.g. India has more than 2,000 ethnic groups); and countries built on immigrants from various countries (e.g., the United States, Canada, and Australia) cannot be viewed as a single national entity (Dann 1993).

To offset some of these criticisms as well as to research alternative facets of nationality, in this study “nationality” will be disaggregated into three sub-variables for testing.

H_6 . The specification of the world’s most beautiful cities differs significantly on the basis of the number of countries visited in one’s lifetime.

Research might be expected to reveal that travel perceptions will differ between well-traveled individuals and those who have not traveled extensively. However, there has been a scarcity of data on the differences in travel patterns of tourists in these groups. Extensive statistics are available on the origins and destinations of tourists worldwide (from the United Nations World Tourism Organization, among others), but those figures do not address how many countries a given cohort of tourists visit in their lifetimes.

Fortunately, as will be explicated shortly in the Study Methods section, two of the previously mentioned sources of beautiful city rankings based on surveys – Flight Network (2019) and CitiesBeautiful.org (2020) – do provide data for directly addressing H_6 .

H_7 . There are significant differences in the choice of the world’s most beautiful cities on the basis of personality, as measured by the Big Five Personality Factors (BFF):

H_{7a} . Openness (*inventive/curious compared to consistent/cautious*).

H_{7b} . Conscientiousness (*efficient/organized compared to extravagant/careless*).

H_{7c} . Extraversion (*outgoing/energetic compared to solitary/reserved*).

H_{7d}. Agreeableness (friendly/compassionate compared to challenging/callous).

H_{7e}. Neuroticism (sensitive/nervous compared to resilient/confident).

A number of studies have researched relationships between BFF personality traits and other marketing segmentation constructs. One study compared 12 travel personalities, originally developed by Gretzel and colleagues (2004), against the BFF traits and travel behaviors, and concluded that the differences between the travel personalities can be explained in terms of differences in each of the BFF traits (Jani 2014a). A study of tourists visiting Da Nang, Vietnam, compared BFF traits against a classification of recreation types originally developed by Pizam and Sussmann (1995), with the intention of identifying businesses that could profitably market to each of the five traits. The findings indicated that extraversion is correlated with social interactions (such that, for example, restaurants will be successful in targeting extraversion customers); neuroticism is associated with bargaining activities (grocery stores, casinos); conscientiousness is associated with knowledge (museums, convention centers); agreeableness is associated with commercial transactions (shopping complexes, social gatherings); and openness is associated with activity preferences (movie theaters, amusement parks). (Tran, Nguyen, and Nguyen 2015).

More directly relevant herein are studies researching statistically significant relationships when focusing solely on BFF traits. A survey with 360 respondents explored BFF traits in relation to travel curiosity. The results showed that openness to experience was positively associated with the 'interest-type' travel curiosity, whereas neuroticism and agreeableness were positively associated with the 'deprivation-type' travel personality (Jani 2014b). Another study aimed at relating South Korean tourists' Internet search behaviors to BFF traits. The results indicated that individuals with high openness to experience and neuroticism were more likely to search travel information from the Internet, and that the BFF traits substantially improved the predictability of tourists' Internet search behaviors (Jani, Jang, and Hwang 2014). Openness, neuroticism, and agreeableness emerged as significant predictors in both studies, suggesting that they are particularly important characteristics when it comes to travelers' divergent preferences and perceptions. Extraversion and conscientiousness demonstrated no significant effects in either study.

H_{7a} through **H_{7e}** will comprise the first statistical tests of BFF in direct relation to tourists' perceptions of the world's most beautiful cities.

3. STUDY METHODS

3.1 Data Sources

The seven hypotheses will be tested using survey responses from three sources: Ranker.com (2020), CitiesBeautiful.org (2020), and Flight Network (2019). In contrast to the other beautiful city surveys cited previously, these three surveys embody the opinions of thousands of participants rather than a few members of an editorial staff, and at least 25 cities rather than as few as 10 cities.

'The Most Beautiful Cities in the World' (Ranker.com 2020): Visitors to the Ranker.com webpages can rate items in various lists, including a list of 135 beautiful cities worldwide. Ranker.com derives an overall ranking of the items using an algorithm based on the number of upvotes, the ratio of upvotes to downvotes, how often the item is ranked, and where in the list the item is ranked. At the time of the study, the ranking of the most beautiful cities in the world was based on approximately 62,000 votes cast by approximately 4,600 webpage visitors from November 2019 onward.

'The World's Most Beautiful Cities' (Flight Network 2019): Flight Network investigated the world's most beautiful cities by "asking the experts — 1000+ Travel Writers, Travel Bloggers and Travel Agencies from all around the globe, who have seen and experienced the best the planet has to offer." The rankings from each individual respondent were combined into a ranked list of the 50 most beautiful cities in the world.

'Civic Beauty Ranking Test' (CitiesBeautiful.org 2020): CitiesBeautiful.org is an educational website for promoting a greater understanding and appreciation of beautiful cities everywhere. Among the website's features is a Ranking Test with which visitors can determine which of 15 categories of civic beauty resonate with them the most. When completing the Ranking Test, respondents are asked to select the most beautiful city from a pull-down list of 25 cities on six continents. Additionally, the Ranking Test includes questions on each test taker's gender, age, level of education, number of countries lived in, home continent, number of countries visited, and BFF profile. As of January 2020, the number of valid survey responses from unique visitors worldwide was 330.

3.2 Procedure

Survey responses from all three of these sources will be used in testing the first hypothesis. The remaining six hypotheses will be tested using solely the CitiesBeautiful.org survey, as neither of the other two sources report demographic information on their survey respondents.

Again, the total count of hypotheses and sub-hypotheses (e.g., H_{1a} , H_{1b}) to be tested is 16. Due to a large number of variables encompassed by these hypotheses and sub-hypotheses, a total of 28 statistical analyses will be performed. For all tests, the accepted statistical standard will be a p -value less than .05 (though tests with a p -value below .1 will be noted).

H_1 will be tested using Spearman's rank correlation coefficient, *a.k.a.* Spearman's Rho (specifically, utilizing the RANK.AVE, CORREL, and TDIS functions in Microsoft Excel). Three comparisons will be made: Ranker.com vs. Flight Network (43 cities in common), Ranker.com vs. CitiesBeautiful.org (23 cities in common), and Flight Network vs. CitiesBeautiful.org (21 cities in common).

Table 1 on the next page shows the ordinal rankings of the cities in common in the three data sets, i.e., the cities to be analyzed. The rankings are reproduced directly from the three websites. Gaps in the rankings are due to cities not held in common; for example, Fez is ranked 24th at the CitiesBeautiful.org website but is not ranked at the other two websites, and accordingly is excluded from Table 1. Cities with lower numbers are deemed more beautiful than cities with higher numbers, such that in Table 1 Venice is the most beautiful city according to the Ranker.com survey while Paris is the most beautiful city according to both the Flight Network and CitiesBeautiful.org surveys.

Table 1. The ordinal rankings of the cities to be analyzed as presented at the three data source websites.

City	Ranker.com	Flight Network	CitiesBeautiful.org
Amsterdam	9	13	3
Athens	38	50	12
Bangkok	65	43	
Barcelona	3	6	5
Bergen	39	47	
Berlin	43	36	
Bruges	18	26	
Budapest	24	16	13
Buenos Aires	42	20	18
Cape Town	30	7	19
Chicago	104	25	22
Dubai	37	29	
Dublin	48	45	
Dubrovnik	15	41	
Edinburgh	8	31	
Hanoi	117	37	
Havana	64	28	
Hong Kong	32	24	11
Istanbul	12	17	8
Jaipur	83	48	25
Jerusalem		30	16
Kyoto	13		15
Lisbon	14	12	
London	11	3	9
Madrid	27	27	
Melbourne	63		23
New York	57	2	
Paris	5	1	1
Prague	4	14	4
Quebec	17	23	
Rio de Janeiro	16	15	7
Rome	2	10	2
San Diego	131	22	
San Francisco	49	8	6
San Miguel de Allende	87	39	
San Sebastian	34	42	
Seoul	66	40	21
Singapore	56	11	
St. Petersburg	6	35	17
Sydney	25	9	14
Tokyo	22	18	
Toronto	26	21	
Vancouver	19	5	10
Venice	1	4	
Vienna	10	19	
Washington DC	125		20
Zurich	33	33	
<i>Number of Cities</i>	<i>46</i>	<i>44</i>	<i>24</i>

The other six hypotheses, H_2 through H_7 , will all be tested using Pearson's Chi-Square test (specifically, the CHISQ.TEST function in Microsoft Excel). A similar procedure will be used in each case. An example, for H_2 in particular, is shown in Table 2. The table shows the number of persons who named the given city as the most beautiful in the world, stratified by gender. For example, Barcelona was cited by 13 female survey respondents and 6 male respondents as being the most beautiful city in the world, London was cited by 8 females and 5 males, and so on.

Though 330 valid survey responses were recorded at the CitiesBeautiful.org website, not all respondents answered all the demographic questions. Note that in Table 2 the total sample size is 315, indicating that 15 of the 330 survey respondents declined to specify their gender.

Table 2. The number of respondents who ranked each city as the world's most beautiful, stratified by gender.

City	Female	Male
Amsterdam	12	12
Athens	6	2
Barcelona	13	6
Budapest	5	3
Buenos Aires	2	3
Cape Town	3	1
Chicago	0	2
Fez	5	1
Hong Kong	2	4
Istanbul	6	5
Jaipur	0	0
Jerusalem	5	1
Kyoto	5	2
London	8	5
Melbourne	1	1
Paris	51	21
Prague	11	9
Rio de Janeiro	8	8
Rome	24	11
San Francisco	10	6
Seoul	1	3
St. Petersburg	2	4
Sydney	6	2
Vancouver	7	5
Washington, D.C.	2	3
Sample Size	195	120

All the survey questions can be reviewed at the CitiesBeautiful.org (2020) website. The definitions of the variables are self-evident for most of the variables, with the exception of Language Spoken and the Big Five Personality Factors (BFF). The Language Spoken by survey respondents was determined by whether they took the Ranking Test at the English version or the Spanish version available at the CitiesBeautiful.org website. (A French version is also available but the sample size was too small for inclusion in this study). The BFF counts were based on a BFF test with a 10-point response format, which again can be reviewed at the CitiesBeautiful.org (2020) website. Respondents were bifurcated by those rating themselves on the 1 to 5 left side of the spectrum versus those on the 6 to 10 right side.

4. STUDY FINDINGS

The results of the correlation analyses for hypothesis H_{1a} are summarized in Table 3. Each of the three analyses were statistically significant, and therefore H_{1a} is accepted.

Table 3. The results of the Spearman's Rho correlation analyses for H_1 .

Hypothesis	Sub-Variable 1 (Sample Size)	Sub-Variable 2 (Sample Size)	Spearman's Rho Coefficient	Spearman's Rho p-Value
H_{1a}	Ranker.com (43)	Flight Network (43)	.491	.00083***
	Ranker.com (23)	CitiesBeautiful (23)	.791	.00001***
	Flight Network (21)	CitiesBeautiful (21)	.612	.00321***
Legend: * = significant at $p < 0.1$, ** = significant at $p < 0.05$, *** = significant at $p < 0.01$				

H_{1b} posits consistently similar rankings of beautiful cities by the general public and travel experts. Based on their sample sizes and survey methodologies, the Ranker.com and CitiesBeautiful.org surveys are considered to reliably represent the general public's opinions on beautiful cities. The Flight Network survey is considered to reliably represent travel experts' opinions. In Table 3 the Ranker.com and CitiesBeautiful.org surveys both have significant p -values with the travel experts of the Flight Network survey. Accordingly, the working hypothesis H_{1b} is also accepted.

Turning to hypotheses of H_2 through H_7 , Table 4 summarizes all the statistical findings. No statistically significant differences were found for a p -value less than .05 except for the BFF of conscientiousness. Therefore, H_{7b} is accepted but all the remaining hypotheses are rejected.

Table 4. The results of the Chi-Square tests for H_2 to H_7 .

	Variable	Sub-Variable 1 (Sample Size)	Sub-Variable 2 (Sample Size)	Chi-Square p -Value
H_2	Gender	Female (195)	Male (120)	.550
H_{3a}	Age	Under 30 Years (108)	30 to 49 Years (92)	.128
H_{3b}		Under 30 Years (108)	50 Years and Older (111)	.069*
H_{3c}		30 to 49 Years (92)	50 Years and Older (111)	.882
H_{4a}	Level of Education	High School (65)	College (149)	.341
H_{4b}		High School (65)	Postgraduate (92)	.983
H_{4c}		College (149)	Postgraduate (92)	.565
H_{5a}	Language Spoken	English (222)	Spanish (76)	.235
H_{5b}	Number of Countries Lived In	One Country (174)	More Than One Country (127)	.347
H_{5c}	Continent Where Grew Up	Asia/Australia/Polynesia (41)	Europe (106)	.219
		Asia/Australia/Polynesia (41)	North America (93)	.763
		Asia/Australia/Polynesia (41)	South America (58)	.199
		Asia/Australia/Polynesia (41)	Africa (21)	.145
		Europe (106)	South America (58)	.819
		Europe (106)	North America (93)	.776
		North America (93)	South America (58)	.476
		Africa (21)	Europe (106)	.106
		Africa (21)	North America (93)	.167
Africa (21)	South America (58)	.109		
H_6	Number of Countries Visited	0 to 9 Countries (157)	10 Or More Countries (152)	.509
H_{7a}	Big Five Personality Factors (BFF)	Open (170)	Not Open (139)	.393
H_{7b}		Conscientious (165)	Not Conscientious (146)	.013**
H_{7c}		Extraverted (133)	Not Extraverted (188)	.828
H_{7d}		Agreeable (177)	Not Agreeable (145)	.734
H_{7e}		Neurotic (154)	Not Neurotic (165)	.545

Legend: * = significant at $p < 0.1$, ** = significant at $p < 0.05$, *** = significant at $p < 0.01$

5. DISCUSSION

5.1 Relation to Findings of Past Studies

The purpose of this study has been to determine whether rankings of beautiful cities are statistically consistent across multiple surveys, and to explore whether these rankings are affected by demographic characteristics such as gender, age, education, nationality, and personality.

In previous literature, no studies have investigated whether the rankings of beautiful cities by the general public, travel experts, and the combinations thereof, are statistically similar. The present study demonstrated that there are statistically significant similarities in the rankings of beautiful cities from alternative survey sources, utilizing data collected from both travel experts and the general public.

Similarly, no previously published studies have analyzed whether beautiful city rankings are affected by the number of countries the respondent had visited, as was done in this study with hypothesis H_6 . The H_6 finding that there are no significant differences between those who have visited many countries and those who have visited few countries is also consistent with the findings of hypothesis H_1 . That is, the city rankings of the travel experts of the Flight Network survey (who presumably have traveled extensively) are not statistically different than the travel rankings of the general public respondents of CitiesBeautiful.org (one-third of whom have visited 5 countries or fewer).

Regarding the remaining hypotheses, comparisons to past studies can be problematic given that past studies (1) utilized different definitions of variables and adopted different survey methodologies, and (2) the current study is the first to specifically explore whether gender, age, level of education, nationality (measured in terms of language spoken, number of countries lived in, and continent where grew up), and the Big Five Personality Factors (BFF) affect beautiful city rankings.

That said, with respect to travel motivations and perceptions past studies have highlighted various statistically significant differences with regard to gender, age, level of education, and nationality. The current study, however, did not find statistically significant differences for any of these variables when it came to the rankings of beautiful cities.

Concerning BFF, past studies have reported significant effects with regard to openness, agreeableness, and neuroticism, but not extraversion nor conscientiousness. The current study found significant effects only for conscientiousness. The past studies and current study thus agree only on extraversion having no significant effect.

5.2 Unique Findings of This Study

Again, per H_1 , there were highly statistically significant similarities in the rankings of beautiful cities from three diverse data sets, utilizing data collected from both travel experts and the general public.

Of the 28 statistical tests performed in this study, conscientiousness was the only variable that demonstrated statistical significance, with a p -value of .013. What might explain this unique finding that conscientious individuals differ from non-conscientious individuals when it comes to beautiful city rankings? For example, is there a discernible pattern in the conscientious versus non-conscientious distribution of survey responses among the 25 beautiful cities?

As it happens, 5 of the 25 cities account for more than half of the cumulative variations between the conscientious and non-conscientious survey responses, and therefore are an appropriate focus when searching for a pattern. Table 5 shows the percentage distribution of the two groups' choices among those five cities. Note that the conscientious survey respondents favored Amsterdam, Istanbul and Hong Kong; the non-conscientious respondents, Kyoto and Prague.

Table 5. Percentage distribution of conscientious versus non-conscientious choices of beautiful cities.

City	Conscientious	Non-Conscientious	Spread	Cumulative Spread*	Average Spread
Amsterdam	10.9%	3.4%	7.5%	25.8%	5.2%
Kyoto	0%	4.8%	- 4.8%		
Istanbul	6.1%	1.4%	4.7%		
Prague	4.2%	8.9%	- 4.7%		
Hong Kong	4.8%	0.7%	4.1%		
Remaining 20 Cities				24.9%	1.2%

*Sum of the absolute values of the individual city spreads

Some of these results are counter-intuitive. For generations Amsterdam has been famously tolerant of the use of marijuana and other recreational drugs outlawed elsewhere. Research studies have found that non-conscientious individuals are more likely to abuse drugs than conscientious individuals (Turiano, Whiteman, Hampson, Roberts, and Mroczek 2012). Presumably Amsterdam would attract more non-conscientious than conscientious survey respondents,

yet three times more conscientious than non-conscientious respondents cited Amsterdam. With its 1,600 Buddhist temples and 400 Shinto shrines, Kyoto is arguably Japan's religious center. Research studies have correlated conscientiousness with religiosity (Saroglou 2002), yet Kyoto was selected only by non-conscientious survey respondents.

Acknowledging that drug use and religiosity were not variables analyzed throughout this study, the Amsterdam and Kyoto counter-intuitive findings nonetheless are not encouraging when searching for a readily discernible pattern in the conscientious versus non-conscientious distribution of survey responses. Some other explanation must be found – but where to start?

5.3 A Suggested Postulate

What might explain 27 non-statistically significant findings plus only one (sometimes counter-intuitive) significant finding? Here is one possible explanatory postulate: **An individual's choice for the world's most beautiful city will be based on a synthesis of numerous sensory, emotional, intellectual and even spiritual factors – a synthesis too complex to be explained by singularly examining gender, age, education, or the other traditional variables analyzed in this study.**

As a potential case in point, CitiesBeautiful.org researched "common threads" in theories of civic beauty in diverse disciplines (architecture, city planning, aesthetic philosophy, behavioral psychology, etc.) from the Ancient Greeks to the present. The research led to 15 categories of civic beauty utilized in the website's previously cited Ranking Test. Nearly 2,000 beautiful sites in 25 cities worldwide have been linked to these 15 categories and mapped at the website. Arguably, an individual's choice of beautiful cities will be driven at least in part by which of the 15 categories resonate with the individual the most, second-most, third-most and so on through all 15 categories – that is, a 15-dimensional synthesis. The greater the number of beautiful sites that a city has in the 15 categories favored most by an individual, the greater the likelihood of that individual naming that city as the most beautiful.

Whether peoples' choices of beautiful cities are driven by a 15-dimensional synthesis or a fewer number of vectors, the current study reveals that beautiful city rankings cannot be explained by analyzing one demographic variable at a time.

5.4 Applications

The paramount finding of this study is that the results of future surveys ranking beautiful cities worldwide have a high statistical probability of closely resembling the rankings in the current study – irrespective of the gender, age, education, nationality and personality (save conscientiousness) characteristics of the survey respondents.

Table 6 on the next page replicates Table 1, except this time displaying the normalized ranking (on a scale of 0 to 1) of each city for each of the three data sets; also calculated is the average normalized ranking for each city. The total of 47 cities in the three data sets are ordered from the most beautiful to the least beautiful based on the average normalized rankings. Paris emerges as the city most frequently named as the most beautiful, followed by Venice in second place, then Rome in third place, and so on. Table 6 thereby predicts the approximate rankings of these 47 beautiful cities in future surveys.

Table 6. Predicted approximate ordering of 47 beautiful cities in future ranking surveys.

City	Ranker.com	Flight Network	CitiesBeautiful.org	Average Normalized Ranking
Paris	2.4	1.0	1.0	1.5
Venice	1.0	3.8		2.4
Rome	1.5	9.5	2.9	4.6
Barcelona	1.9	5.7	9.0	5.5
Amsterdam	3.8	12.3	4.8	7.0
Prague	1.9	13.7	7.1	7.6
London	4.8	2.9	16.5	8.1
Lisbon	5.7	11.3		8.5
Vancouver	7.6	4.8	18.9	10.4
Rio de Janeiro	6.6	14.6	12.8	11.3
Vienna	4.3	18.4		11.3
New York	21.2	1.9		11.6
Istanbul	4.8	16.5	14.6	12.0
San Francisco	18.4	7.6	10.9	12.3
Tokyo	8.5	17.5		13.0
Quebec City	6.6	22.2		14.4
Sydney	9.5	8.5	26.4	14.8
Toronto	9.9	20.3		15.1
Singapore	20.7	10.4		15.6
Bruges	7.1	25.0		16.0
Edinburgh	9.5	15.6		12.5
Budapest	3.4	29.7	1.0	11.3
Kyoto	5.2		28.3	16.7
Cape Town	11.3	6.6	36.3	18.1
Madrid	10.4	25.9		18.2
Hong Kong	12.3	23.1	20.7	18.7
Dubai	14.2	27.8		21.0
Zurich	12.8	31.6		22.2
Dubrovnik	6.2	39.5		22.9
St. Petersburg	2.9	33.4	32.5	22.9
Buenos Aires	16.0	19.3	34.4	23.2
Havana	23.6	26.9		25.2
Berlin	16.0	34.4		25.2
San Sebastian	12.8	40.5		26.6
Athens	14.2	48.0	22.6	28.3
Jerusalem		28.7	30.6	29.7
Bergen	14.6	45.2		29.9
Dublin	17.9	43.3		30.6
Bangkok	24.0	41.4		32.7
Melbourne	23.6		44.2	33.9
Seoul	24.5	38.6	40.0	34.4
San Diego	48.0	21.2		34.6
San Miguel de Allende	32.0	37.7		34.8
Chicago	38.1	24.0	42.4	34.8
Hanoi	42.8	35.3		39.1
Jaipur	30.6	46.1	48.0	41.6
Washington DC	45.7		38.1	41.9

Consequently, any tourism marketing campaign focusing on the world's most beautiful cities in all probability can use Table 6 to reliably prioritize cities for inclusion in the campaign. As a corollary, the results of this study suggest that market campaign need not bother segmenting the campaign on the basis of gender, age, level of education, nationality or personality, as the rankings of beautiful cities do not vary significantly among these demographic groups.

6. CONCLUSIONS AND IMPLICATIONS

6.1 Contributions of the Study

Whereas previous studies have suggested that a person's demographic characteristics affect travel motivation and certain travel perceptions, the present study shows that these characteristics do not significantly affect beautiful city rankings. That is, rankings of beautiful cities are perhaps unique in the almost complete absence of statistically significant differences in destination preferences based on gender, age, and other variables that typically have been observed in previous studies.

Moving beyond past studies into previously unexplored realms, the current study highlights statistically significant findings on the specific topic of survey respondents' opinions on the world's most beautiful cities. The ordinal rankings of the world's most beautiful cities in any future survey can now be accurately predicted, whatever the demographic characteristics of the survey respondents. Consequently, marketing campaigns focusing on beautiful cities can use the results presented in Table 6 as a reliable listing to guide their priorities.

6.2 Further Research

What is it about Paris, Barcelona, Rome, Amsterdam, etc., that will almost always place them in the top ranks of surveys of the world's most beautiful cities? Possible research hypotheses could include superlative architecture, unique landmarks (e.g., the Parthenon, Hagia Sofia, Eiffel Tower), deep historical traditions, compelling cultural amenities, "famous for being famous" self-perpetuating reputations, and so on. In future research, it will be valuable to explore exactly which aspects of these urban environments are most strongly associated with the perception of beauty.

Among the benefits of such future research would be directly translating statistically significant findings into tourism marketing campaigns, e.g., "join our tour of the stunning architecture of these cities". Such findings could also be utilized by the tourism development agencies in cities worldwide, by identifying and marketing their qualifying assets – in this example, whatever local "stunning architecture" a given city can promote.

Further research could also address the postulate offered previously: "An individual's choice for the world's most beautiful city will be based on a synthesis of numerous sensory, emotional, intellectual and even spiritual factors – a synthesis too complex to be explained by singularly examining gender, age, education, or the other traditional variables analyzed in this study". One starting point could be CitiesBeautiful.org's 15 categories of civic beauty.

Though the focus of this study has been on applications in tourism, other academic disciplines could also benefit from further research on what makes cities beautiful: architecture (as exemplified by the previously cited Iovene, Smith, and Seresinhe 2019); city planning (e.g., per the Commission for Architecture and the Built Environment [CABE] 2020); sociology (Florida, Mellander, and Stolarick 2009); economic development (Carlino and Saiz 2008); behavioral psychology (Nia and Atun 2016 and Puffer 1905); environmental psychology, landscape architecture, and historic preservation, among others.

Such research on beautiful cities should continue to prove rewarding because, in the end, beautiful cities do fundamentally matter to humankind. As expressed by the Italian poet Dante Alighieri: "Beauty awakens the soul to act." (Alighieri 1472).

REFERENCES

- Alighieri, D. 1472. "Purgatorio, Canto XVIII, 19 – 21". <https://www.gutenberg.org/files/8795/8795-h/8795-h.htm>
["Beauty awakens the soul to act" is the widely used paraphrase of this (translated) original: "The soul, which is created quick to love, responds to everything that pleases, just as soon as beauty wakens it to act."]
- Andreu, L., Kozac, M., Avci, N., and Cifter, N. 2005. "Market segmentation by motivations to travel: British tourists visiting Turkey". *Journal of Travel and Tourism Marketing* 19 (1): 1-14.
- Beerli, A. and Martín, J. 2004. "Tourists' characteristics and the perceived image of tourist destinations: A quantitative analysis — A case study of Lanzarote, Spain". *Tourism Management* 25 (5): 623–636.
- Bloom, L. 2016. "Are these the 20 most beautiful places in the world?". *Forbes*.
<https://www.forbes.com/sites/laurabegleybloom/2016/08/18/are-these-the-20-most-beautiful-places-in-the-world/>

- Brard, E. 2019. "Lonely Planet's top ten most beautiful cities to visit in 2020". *Lonely Planet*.
<https://thecarousel.com/travel/destinations/lonely-planets-top-ten-most-beautiful-cities-to-visit-in-2020/>
- Commission for Architecture and the Built Environment. 2010. "People and places: Public attitudes to beauty", *Ipsos MORI Social Research Institute on behalf of the Commission for Architecture and the Built Environment*.
<https://www.designcouncil.org.uk/sites/default/files/asset/document/people-and-places.pdf>
- Carlino, G. and Saiz, A. 2008. "Working Paper No. 08-22—City Beautiful", *Research Department of the Federal Reserve Bank of Philadelphia*. <https://www.philadelphiafed.org/-/media/research-and-data/publications/working-papers/2008/wp08-22.pdf>
- Carr, N. 1999. "A study of gender differences: Young tourist behavior in a UK coastal resort". *Tourism Management* 20 (2): 223–228.
- CitiesBeautiful.org. (2020). "Civic beauty ranking test". *CitiesBeautiful.org*. <http://citiesbeautiful.org/civic-beauty-ranking-test>
- Dann, G. 1993. "Limitation in the use of "nationality" and "country of residence" variables". In *Tourism Research: Critiques and Challenges*, edited by D. Pearce and R. Butler, 88-112. London: Routledge.
- Flight Network. 2019. "The world's 50 most beautiful cities". *Flight Network*.
<https://web.archive.org/web/20191221223155/https://www.flightnetwork.com/blog/worlds-most-beautiful-cities/>
- Florida, R., Mellander, C. and Stolarick, K. 2009. "Beautiful places: The role of perceived aesthetic beauty in community satisfaction". *Journal of Regional Studies* 45 (1): 33-48.
- Florida, R., Mellander, C. and Stolarick, K. 2011. "Here to stay—The effects of community satisfaction on the decision to stay". *Spatial Economic Analysis* 6 (1): 5-24.
- Gretzel, U., Mitsche, N., Hwang, Y. and Fesenmaier, D. 2004. "Tell me who you are and I will tell you where to go: Use of travel personalities in destination recommendation systems". *Journal of Information Technology and Tourism* 7 (1): 3-12.
- Gross, L. (2015). "The most beautiful city in the world – as voted by you". *Rough Guides*.
<https://www.roughguides.com/gallery/most-beautiful-city-in-the-world/>
- Iovene, M., Smith, N. and Seresinhe, C. 2019. "Of streets and squares - Which public places do people want to be in and why". *Cadogan, Create Streets*.
https://issuu.com/cadoganlondon/docs/of_streets_and_squares_26_march_wit?e=32457850/68741701
- Jani, D. 2014a. "Relating travel personality to Big Five Factors of personality". *Tourism: An International Interdisciplinary Journal* 62 (4): 444-456.
- Jani, D. 2014b. "Big Five Personality Factors and travel curiosity: Are they related?" *Anatolia - An International Journal of Tourism and Hospitality Research*. 25 (3): 444-456.
- Jani, D., Jang, J. and Hwang, H. 2014. "Big Five Factors of personality and tourists' Internet search behavior". *Asia Pacific Journal of Tourism Research* 19 (5): 600-615.
- Jensen, J. M. 2006. "Segmenting European tourists by nationality: An investigation of visitors to attractions on the Danish Island of Funen". *Scandinavian Journal of Hospitality and Tourism* 6 (3): 248-264.
- Jensen, J. 2011. "The relationships between socio-demographic variables, travel motivations and subsequent choice of vacation". In *Proceedings for the 2nd International Conference on Economics, Business and Management – ICEBM, Singapore* 22: 37-44.
- Jönsson, C. and Devonish, D. 2008. "Does nationality, gender, and age affect travel motivation? A case of visitors to the Caribbean Island of Barbados". *Journal of Travel & Tourism Marketing* 25 (3–4): 398-408.
- Kara, N. and Mkwizu, K. 2020. "Demographic factors and travel motivation among leisure tourists in Tanzania", *International Hospitality Review* 34 (1): 81-103.
- Kattiyapornpong, U. and Miller, K. 2007. "Differences within and between travel preference, planned travel and choice behavior of Australians travelling to Asian and overseas destinations". In *Proceedings of CAUTHE 2007: Tourism: Past Achievements, Future Challenges, Sydney*.

- Kim, D., Lehto, X. and Morrison, A. 2007. "Gender differences in online travel information search: Implications for marketing communications on the Internet". *Tourism Management* 28 (2): 423-433.
- Kim, H., Cheng, C. and O'Leary, J. 2007. "Understanding participation patterns and trends in tourism cultural attractions". *Tourism Management* 28 (5): 1366-1371.
- Leyden, K., Goldberg, A. and Michelbach, P. 2011. "Understanding the pursuit of happiness in ten major cities". *Urban Affairs Review* 47 (6): 861-888.
- Marchant, T. 2019. "These are the most beautiful cities in the world". *Harper's Bazaar*.
<https://www.harpersbazaar.com/culture/travel-dining/g12244524/most-beautiful-city-in-world/>
- Morton, C. 2019. "50 most beautiful cities in the world". *Condé Nast*. <https://www.cntraveler.com/galleries/2016-01-08/the-50-most-beautiful-cities-in-the-world>
- Nia, H., and Atun, R. 2016. "Aesthetic design thinking model for urban environments: A survey based on a review of the literature". *Urban Design International* 21: 195–212.
- Pizam, A. and Jeong, G. 1996. "Cross-cultural tourist behavior: Perceptions of Korean tour-guides". *Tourism Management* 17 (4): 277-286.
- Pizam, A. and Sussman, S. 1995. "Does nationality affect tourist behaviour?". *Annals of Tourism Research* 22 (4): 901-917.
- Puffer, E. 1905. *The Psychology of Beauty*. Boston, MA: Houghton Mifflin.
- Ranker Travel. 2019. "The most beautiful cities in the world". *Ranker.Com*. <https://www.ranker.com/list/most-beautiful-cities-in-the-world/ranker-travel>
- Richards, G. 1996. "Production and consumption of European cultural tourism". *Annals of Tourism Research* 23 (2): 261-283.
- Ryan, M., Henley, N. and Soutar, G. 1998. "Gender Differences in Tourism Destination Choice: Implications for Tourism Marketers", Australian and New Zealand Marketing Conference, Dunedin, New Zealand, 1998
- Saroglou, V. "Religion and the Five Factors of Personality: A Meta-Analytic Review". *Personality and Individual Differences* Volume 32, Issue 1, 5 January 2002,15-25
- Tran, X., Nguyen, B., Nguyen, M., *Effects of the Big Five Personality Traits on Recreation Types - The Case of Vietnam Tourism*, University of Massachusetts Amherst, scholarworks.umass.edu:ttra-1043, Travel and Tourism Research Association (TTRA) International Conference, 2015
- Turiano, N., Whiteman, S., Hampson, S., Roberts, B. and Mroczeka, D. 2012. "Personality and Substance Use in Midlife: Conscientiousness as a Moderator and the Effects of Trait Change". *Journal of Research in Personality*, Volume 46, Issue 3, June 2012, 295-305
- U City Guides. 2020. "Top 10 most beautiful cities in the world". <https://www.acityguides.com/cities/top-10-most-beautiful-cities.html>
- Van Eijck, K. 1997. "The impact of family background and educational attainment on cultural consumption: A sibling analysis". *Poetics* 25: 195-224.
- Wang, R. and Hao, J. 2018. "Gender difference on destination image and travel options: An exploratory text-mining study", *Proceedings of 15th International Conference on Service Systems and Service Management (ICSSSM), Hangzhou*.