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International and Domestic Tourists' "a priori" and "in situ" Image Differences and the Impact of Direct Destination Experience on Destination

Image: The Case of Linz, Austria

Elitza Iordanova<sup>a</sup> & Dimitrios Stylidis<sup>b</sup>

<sup>a</sup>Buckinghamshire New University, U.K., Elitza.Iordanova@bucks.ac.uk

<sup>b</sup>Middlesex University London, U.K., D.Stylidis@mdx.ac.uk

**Abstract** 

A profound understanding of destination image and its determinants is of significance for

destinations aiming to effectively position themselves in the tourism market. However,

existing research on destination image formation has mainly focused on the "a priori" and "a

posteriori" stages and paid only limited attention to the "in situ" stage. To fill in this gap, this

study examines the effect direct destination experience and visitors' nationality (domestic vs.

international), have on both "pre-travel" and "in-situ" cognitive and affective elements of

image. The study was conducted using 400 international and domestic visitors to Linz,

Austria. The findings indicate that there are significant differences in the way domestic and

international tourists perceive Linz as a tourist destination both prior and during the actual

experience. The study also provides empirical evidence that direct destination experience

plays a major role in destination image formation, irrespectively of individual's nationality.

The theoretical and practical implications of these findings are also discussed.

**Keywords:** destination image formation; domestic tourists; international tourists; visitors'

experience; nationality

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# 1. Introduction

Over the past decades a growing number of cities worldwide have approached tourism as a catalyst for economic development, urban regeneration and social change (McGehee & Andereck, 2004; Stylidis & Terzidou, 2014). As a result, competition between cities to get a share of tourism benefits has gradually been intensified (Sahin & Baloglu, 2011). Establishing a city as a tourist destination and developing a successful place brand in such a highly competitive environment is a challenging and demanding activity (Hosany, Ekinci & Uysal, 2006). To this end, destination marketers invest much effort and resources in creating an attractive image in tourists' minds based on both cognitive and affective image evaluations (Kneesel, Baloglu & Millar, 2010), as people usually select places with more favourable or stronger images to visit (Ahmed, 1991; Bandyopadyay & Morrais, 2005). Similar to consumer brands, destination image is critical in making places desirable for prospective visitors (Papadimitriou, Apostolopoulou & Kaplanidou, 2015). Besides destination choice, city image is also known to influence tourists' on-site experience and future behavior including intention to return (e.g. Iordanova, 2015; Kim & Perdue, 2011; Kozak & Baloglu, 2011; Lee, Lee & Lee, 2005; Nicoletta & Servidio, 2012). City image as such has become core to place branding, which commonly refers to 'the development of a consistent element mix to identify and distinguish "place" through positive image building (Cai, 2002, p.722). To improve the competitiveness of a place and increase visitors' loyalty, an in depth understanding of the process of destination image formation and its determinants is needed (Qu, Kim & Im, 2011).

The image of countries has been the main focus of research on destination image for several decades (Pike, 2002). However, the variety of stakeholders involved, and the complexity of country image (place attributes and identities) and brand lead researchers to shift their interest towards the image of city destinations (Baloglu, Henthorne & Sahin, 2014; Chan & Marafa, 2016; Dolnicar, Grabler & Gu, 2004; Papadimitriou et al., 2015; Prayag & Ryan, 2012; Sahin & Baloglu, 2011; Stylidis, Shani & Belhassen, 2017; Terzidou, Stylidis & Terzidis, 2017). For example, Papadimitriou et al. (2015) examined visitors' image of Patra, Greece and Sahin and Baloglu (2011) explored the destination image of Istanbul in Turkey. Numerous other researchers have developed theoretical models and/or conducted empirical studies on destination image formation (Baloglu & McCleary, 1997; Fakeye & Crompton, 1991; Gartner, 1989; Gunn, 1972; Selby & Morgan, 1996; Stylidis, Terzidou & Terzidis, 2010; Tasci, Gartner & Cayusgil, 2007). Past research suggests that differences in people's perceptions of places exist as a result of the impact a) first-hand experience with the destination (Kim & Morrsion, 2005; Smith, Li, Pan, Witte & Doherty, 2015; Vogt & Andereck, 2003), and b) nationality, have on the process of destination image formation (Beerli & Martin, 2004; Bonn, Joseph & Dai, 2005; Hsu, Wolfe & Kang, 2004; Sahin & Baloglu, 2011).

A thorough review of previous studies also indicates the importance of splitting the image formation process into different stages ("a priori", "in situ" and "a posteriori") since image determinants might influence the image formation process differently at various stages (Tasci et al., 2007; Iordanova, 2015). Existing research, however, has heavily focused on the "a priori" and "a posteriori" stages and appears to overlook the "in situ" image along with the factors that shape image at this stage (e.g., experience, nationality). As a result, our

Please cite as: Iordanova, E. & Stylidis, D. (2017). International and Domestic Tourists' "a priori" and "in situ" Image Differences and the Impact of Direct Destination Experience on Destination Image: The Case of Linz, Austria. *Current Issues in Tourism*. Available Online understanding of the destination image formation process is still partial and fragmented. A thorough examination of the 'in-situ' image is needed, since on-site experience accumulated at this stage and the subsequent image developed will influence to a great extent visitors' satisfaction with the trip (Chi & Qu, 2008; Lee, 2009), which in turn is known to affect their future behavioural intentions including intention to revisit and/or to recommend the destination to others (Chen & Phou, 2013; Chi & Qu, 2008; Prayag & Ryan, 2012).

The current study aims to enrich the body of literature on city image by further examining the role direct experience with the destination and visitors' nationality (domestic vs. international) play in the process of destination image formation at both the "a priori" and "in situ" stages. To achieve its aim a) potential differences between international and domestic tourists across both cognitive and affective components of image measured at two different points in time (a priori, in situ) will be explored, along with b) the impact of direct destination experience on the process of destination image formation, including fluctuations that occur in the cognitive and affective image domains as a result of it. The study extends existing knowledge on destination image by focusing on the less researched second stage ("in situ") of city image formation and explores the role two critical factors (experience, nationality) play in this process. The study also enriches the marketing scholarship by providing empirical evidence on the suspected differences across international and domestic tourists' city images. The study's findings have significant practical implications for marketing cities as tourist destinations to both domestic and international audience and for increasing visitors' satisfaction during the actual visitation.

# 2. Literature Review

## 2.1 Defining Tourism Destination Image

The concept of image has been analysed from a variety of perspectives, including psychology, geography, marketing and tourism. The complexity of the topic acorns to the notion that what people believe to be true is subjective and based on their own knowledge (Boulding, 1956). Consequently, their actions depend on the image they have of the world and occur as a result of all past experiences. In the field of tourism, destination image has spawned a diversity of definitions and conceptualizations, which indicates its "multidimensional and complex" nature (Gallarza, Gil & Calderon, 2002, p.56). Indeed, defining tourism destination image is still considered a challenging task (Kim & Richardson, 2003; Rodrigues, Correia & Kozak, 2011; Iordanova, 2015). Some researchers emphasise on its composite structure and suggest that it is "the sum of beliefs, ideas and impressions that a person has of a destination" (Crompton, 1979, p.18). Others use its cognitive and affective elements to portray the concept of image (Mazursky & Jakoby, 1986). Lastly, some others perceive it as an overall impression of a place, a product or experience (Fridgen, 1987; Milman & Pizam, 1995). Upon a thorough review of existing definitions, Iordanova's (2015) approach of destination image as "...a construct consisting of impressions, beliefs, ideas, expectations and feelings accumulated towards a place over time gathered from a variety of information sources and shaped through an individual's socio-demographic and psychological characteristics" (p. 49), appears as the most suitable one for the purpose of this study for several reasons: Firstly, it exemplifies the dynamic nature of this complex concept. Secondly, it portrays the cognitive and affective image elements in terms of knowledge and emotions towards a place, which are in the focus of this study as it will be further discussed

below. Finally, it highlights the importance of socio-demographic characteristics (e.g., nationality) in the process of destination image formation.

Boulding (1956), in his seminal work "The Image: Knowledge in Life and Society", was probably among the first who recognised that people's subjective knowledge consists not only of images of "fact", but also of images of "value". In other words, there is a difference between the image we hold of physical objects and our valuations of them, which is the way we rate the different parts of our image of the world. Applying this framework to tourism studies, researchers assert that people's beliefs and/or knowledge of destination attributes are linked to the cognitive image component (Gartner, 1993; Baloglu & McCleary, 1999; Pike & Ryan, 2004), which entails "...awareness, knowledge or beliefs, which may or may not have been derived from a previous visit" (Pike & Ryan, 2004, p.334). These place attributes, which can induce an individual to visit a destination include, among others, the climate, accommodation and entertainment facilities, as well as various forms of attractions (i.e., natural, cultural, historical, etc.). Tasci et al. (2007) further suggest that people's mental response involves not only beliefs/knowledge, but also memories, evaluations, interpretations and decisions. The cognitive images need not to be representative of the reality or be accurate since beliefs reflecting the attributes of a place are based on personal views and not on objective truth, and are, therefore, highly subjective (Neal, Quester & Hawkin, 1999).

On the other hand, the affective component of image is commonly defined in the literature as "the appraisal of the affective quality of environments" (Hanyu, 1993, p.161) or as emotional reactions (excitement, pleasure, etc.) (Walmsley & Young, 1998), responses (Pocock & Hudson, 1978) or feelings (Russel, 1980) toward tourist destinations. Russell and Snodgrass (1987) called for the relationship between emotional aspects and behaviour saying that

"behaviour may be influenced by the (estimated, perceived, or remembered) affective quality of an environment" (p.246). The affective component of image has been commonly evaluated in the tourism literature using four affective image attributes (distressing-relaxing, unpleasant-pleasant, boring-exciting, and sleepy-lively) on a semantic differential scale (Baloglu & McCleary, 1999; Martin & del Bosque, 2008; Wang & Hsu, 2010). But affective evaluations are not only limited to these adjectives but can be extended to incorporate other words people use to describe the emotional qualities of a destination including peaceful, beautiful, exciting, majestic, enjoyable, hectic, frightening, frustrating, ugly, fearful, desolated, etc. (Russell & Pratt, 1980). In line with Tasci et al. (2007), the level of intensity of the feelings might also differ; words like love and hate demonstrate high intensity, whereas less intense feelings are expressed through the use of like and dislike.

Today it is recognized that both cognitive and affective evaluations are of equal importance in the process of destination image formation (Baloglu & Brinberg, 1997; Chew & Jahari, 2014; Lin, Morais, Kerstetter & Hou, 2007; Martin & del Bosque, 2008; Stylidis, Belhassen & Shani, 2015; Stylidis et al., 2017; Wang & Hsu, 2010). As Baloglu and Brinberg (1997) support, the coexistence of both components more efficiently explains the image a tourist forms of a destination. A large number of studies have further demonstrated that the cognitive component of image serves as an antecedent to the affective component (e.g., Beerli & Martin, 2004; Li, Cai, Lehto & Huang, 2010; Lin et al., 2007; Stylidis et al., 2015). Lin et al. (2007), for instance, reported that tourists form their feelings towards a destination as a result of their cognitive evaluation. Even though people do not resolve image into cognitive and affective components unless they are asked to do so (Baloglu & Brinberg, 1997), the decomposition of image into cognitive and affective elements offers - from a theoretical point of view - better understanding of its structure and supports consecutive analyses (Bagozzi &

Burnkrant, 1985). Lastly, the conative image component is considered to be analogous to behaviour (Sahin & Baloglu, 2011). Conative image has been well recognised in tourism studies (Gartner, 1993; Baloglu & McCleary, 1999; Gallarza et al., 2002; Tasci et al., 2007) as being dependant on the cognitive and affective image domains and represents the "decision stage" of destination image formation. Tourists' behavioural intention is most often captured in the tourism marketing literature utilizing their 'intention to visit/revisit the destination in the future' and/or their 'willingness to recommend it to others' (e.g., Chi & Qu, 2008; Prayag & Ryan, 2012).

#### 2.2 Destination Image Formation

A plethora of studies have dealt with the formation of destination image (Baloglu & McCleary, 1999; Beerli & Martin, 2004; Gallarza et al., 2002; Gartner, 1993). Gunn (1972), building on Bruner's (1951) model of perception formation, proposes a seven-step process of image formation based on the variety of information sources individuals get confronted with throughout their lives. Organic images are formed by non-commercial information sources, while induced images are based on promotional information published in travel brochures or advertisements. Organic and induced image formation agents differ from each other based on the degree of influence destination marketers have over the nature of the disseminated information. Even though organic and induced images are constructed from general information about the place, "images are always highly personal" (Gunn, 1988, p.23), thus adducing that not only information sources take part in the tourism destination image formation process, but also other, more personal determinants exist including individuals' direct experience with the destination or nationality, which are the focal point of this research.

A slightly different model concerning the pre-travel stage of destination image formation was proposed by Baloglu and McCleary (1999). The model distinguishes between two types of image determinants - stimulus factors (quantity and type of information sources used by tourists and their previous destination experience) and personal factors (tourists' sociodemographic characteristics such as age and their psychological identity). Although this model makes a significant contribution to the image formation literature, it lacks explanation on how the image is modified once tourists experience the destination (that is, the "in situ" and "a posteriori" image).

This drawback was addressed by Beerli and Martin's model (2004), where the degree to which a set of factors (primary and secondary information sources, motivation, level of experience with the destination and socio-demographic characteristics) affect tourists' postimage of the destination was investigated. Despite their major contribution, Beerli and Martin (2004) did not assess the impact of information sources and individual's socio-demographic and psychological factors on the initial stage of image formation ("a priori"). Stylidis et al. (2010) successfully overcame this shortcoming by proposing a model of islands' image formation consisting of "a priori" and "a posteriori" stages. Yet, their model was not empirically tested and the "in situ" stage of image was overlooked, which again indicates that our knowledge about the process of destination image formation has been mainly focused on the "a priori" and "a posteriori" stages. An understanding of the in situ image is critical as at this stage perceived quality and satisfaction with the destination are being shaped as a result of a comparison between pre-visit image and actual experience (Phelps, 1986). Such evaluation of the experience at the destination also influences image and further modify it (Bigne, Sanchez & Sanz, 2005; Echtner & Ritchie, 1991; Fakeye & Crompton, 1991; Stylidis

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The above discussion has underlined the complex, dynamic, multidimensional and multidisciplinary structure of tourism destination image (see also Gallarza at al., 2002). The review has also highlighted the importance of dividing the image formation process into different stages ("a priori", "in situ" and "a posteriori"), as the various factors can affect image differently at different stages. Tourism destination image "a priori" could be seen as individual's mental representation of the place with or without having physically experienced it. The "in situ" image is shaped during tourists' actual destination experience and the "a posteriori" image is the one that stays with the individual once the experience is over and is known to influence tourists' post-trip intentions such as revisit and recommendation (Tasci et al., 2007). The following sections discuss in detail the role direct experience and nationality play in destination image formation across the three stages.

#### 2.2.1 The impact of direct experience on destination image formation

A substantial number of researchers and practitioners have explored the effect direct destination experience has on tourism destination image (Baloglu & McCleary, 1999; Beerli & Martin, 2004; Chon, 1991; Fakeye & Crompton, 1991; Hu & Ritchie, 1993; Pearce, 1982; Phelps, 1986; Tasci et al., 2007). The vast majority of these studies, in particular, examined and contrasted visitors' and non-visitors' images of a given tourist destination, but produced contradictory results. A stream of researchers did not find any significant difference in the image held by visitors and non-visitors (Andreu, Bigne & Cooper, 2000; Chen & Kerstetter, 1999; Young, 1999). A tenable explanation is that people are often bound by the image they

Please cite as: Iordanova, E. & Stylidis, D. (2017). International and Domestic Tourists' "a priori" and "in situ" Image Differences and the Impact of Direct Destination Experience on Destination Image: The Case of Linz, Austria. *Current Issues in Tourism*. Available Online have developed beforehand (Young, 1999). On the other hand, other researchers reported that the image of visitors was more positive than that of non-visitors (Fakeye & Crompton, 1991; Konecnik & Ruzzier, 2006; Tasci, 2006). Fakeye and Crompton (1991), for example, revealed image differences between visitors and non-visitors of the Rio Grande Valley in Texas. Furthermore, these researchers did not find much dissimilarity between the images of first-visitors and repeat visitors, finding which indicates that the first visit is to a certain extent the most influential one. In some cases, therefore, actual visitation seems to produce a more positive modified image (Richards, 2001). It also appears that quite often, non-visitors' image is inaccurate and/or tourists visit places that already have a positive image (Cherifi, Smith, Maitland & Stevenson, 2014; Tasci, 2006).

Researchers who further examined the effect of actual visitation on the components of image found that direct experience modifies both the cognitive and the affective component (Fakeye & Crompton, 1991; Hu & Ritchie, 1993; MacKay & Fesenmaier, 1997). For example, Baloglu (2001) reported that differences exist in the cognitive and affective image components between visitors and non-visitors of Turkey, with visitors having more positive perceptions than the non-visitors. Past research, therefore, substantiates that direct experience improves the perception of all components of destination image. These studies, however, have examined 'a priori' and 'a posteriori' images by comparing two different samples, that is, visitors and non-visitors of a tourist destination. This approach restrains from fully understanding the dynamic nature of destination image and how direct experience with the destination potentially modifies the image individuals have beforehand and after actually visiting a place.

To overcome this shortcoming, a relatively limited number of studies have explored the effect of direct experience by comparing the pre-trip and post-trip images using the same tourist sample (Chon, 1991; Kim & Morrsion, 2005; Pearce, 1982; Smith et al., 2015, Tasci, 2006; Vogt & Andereck, 2003; Vogt & Stewart, 1998). Pearce (1982), for example, reported a change between tourists' pre-trip and post-trip destination images of Greece and Morocco. Similarly, Chon (1991) found that post-visitors had more positive perceptions of the image of Korea than pre-visitors. Kim and Morrsion (2005), on the other hand, examined the potential image change of South Korea as perceived by Japanese, Mainland Chinese and US tourists as a result of hosting the 2002 World Cup. Their results indicate that significant differences exist for the five image factors before and after the World Cup for the three tourist groups examined. All three groups of tourists, in particular, had more positive images of Korea after than before the 2002 World Cup. Vogt and Andereck (2003) and Vogt and Stewart (1998) compared pre-trip and in-situ images of Arizona and found that the cognitive component changes during the course of a vacation but the affective component remained rather constant. Finally, Smith et al. (2015) examined Canadian students' images of Peru during five different time frames and found that cognitive image post-trip improves and surpasses the pre-trip one, whereas affective image evaluation remains close to its pre-trip levels. In sum, previous studies have examined the effect of actual visitation on image and found that images examined over two points in time (commonly "a priori" and "posteriori") can vary significantly due to the effect of direct experience with a tourism destination.

#### 2.2.2 The impact of nationality on destination image formation

Apart from direct experience with the destination, tourists' socio-demographic characteristics are also believed to play a role in the process of destination image formation. Various studies, in particular, have discussed the influence of age (Baloglu, 1997, 2001; Beerli & Martin,

2004), gender (Chen & Kerstetter, 1999; MacKay & Fesenmaier, 1997), education (Chen & Kerstetter, 1999; Rittichainuwat, Qu & Brown, 2001), income (MacKay & Fesenmaier, 1997), country of origin (Beerli & Martin; 2004; Chen & Kerstetter, 1999; Fakeye & Crompton, 1991; MacKay & Fesenmaier, 2000; Rittichainuwat et al., 2001; Sahin & Baloglu, 2011) and marital status (Baloglu, 1997; Rittichainuwat et al., 2001) on tourism destination image, but with some inconclusive results. Among these factors, there seems to be an agreement in the literature that country of origin has a significant impact on tourists' destination image (Beerli & Martin, 2004; Hsu et al., 2004; Sahin & Baloglu, 2011). For example, Beerli and Martin (2004) compared the way seven different nationalities of tourists perceived Lanzarote, Spain and found that the country of origin affects tourists' perceptions on both the cognitive and the affective level. It seems that destination image is partly affected by the spatial distance between the country of origin and the destination, as individuals are more likely to have visited destinations that are closer to their country of origin or region, or to have gained information about them through mass media and friends or relatives. Additionally, respondents living far away from a destination were reported to lack a vivid image of it (Cherifi et al., 2014; Reilly, 1990). However, the impact of nationality on tourism destination image formation has been previously analysed on the pre-visit stage or the postvisit stage, whereas its impact on the way people perceive destinations once they directly experience them has not yet been investigated.

Additionally, past research with a few exemptions (Bonn et al., 2005), did not directly explore and compare international and domestic tourists' images of a given destination. Most of the aforementioned studies, in particular, captured and compared the image that various international tourists have of the same tourist place. In contrast, Bonn et al. (2005) compared domestic and international tourists' "in situ" images of Florida and reported significant

differences between these two groups' perceptions of destination image characteristics. The paucity of literature on domestic tourism is frequently explained by the dearth of empirical data on domestic tourism and/or due to underestimation of its significance to the economy (Caravan, 2013; Cortes-Jimenez, 2008; Yang, Liu & Qi, 2014). However, domestic tourism currently accounts for over 70% of total tourist movement, representing 74% of total arrivals and 73% of total overnights (UNWTO, 2014). In addition to its magnitude, domestic tourism seems to have a number of advantages since it has an income redistribution effect inside the country, making it a useful tool for regional development; and is less sensitive to various types of crises that usually influence tourist arrivals (e.g., political instability, wars, consumer boycott) (Pierret, 2011). As such, there is an increasing awareness of the need to also develop marketing scholarship about domestic tourism (Stylidis et al., 2015). Based on the preceding discussion, the following hypotheses are formulated:

Hypothesis 1: Direct experience is positively related to domestic tourists' cognitive city image

Hypothesis 2: Direct experience is positively related to domestic tourists' affective city image Hypothesis 3: Direct experience is positively related to international tourists' cognitive city image

Hypothesis 4: Direct experience is positively related to international tourists' affective city image

Hypothesis 5: Differences exist between international and domestic tourists' cognitive apriori city image

Hypothesis 6: Differences exist between international and domestic tourists' affective a-priori city image

Hypothesis 7: Differences exist between international and domestic tourists' cognitive in-situ city image

Hypothesis 8: Differences exist between international and domestic tourists' affective in-situ city image

The foregoing critical review of the literature demonstrates that despite the wide spectrum of theoretical works or empirically supported studies, still there are only a few studies that touch upon the second stage of destination image formation and explore the role first-hand experience with the destination and visitors' nationality (domestic vs. international) play in the process of destination image formation. Building, therefore, on the work of Vogt and his colleagues (Vogt & Andereck, 2003; Vogt & Stewart, 1998), Smith et al. (2015), and Bonn et al. (2005), the current study addresses this lacuna in the literature and sets out to examine the effect of direct destination experience and nationality on both "pre-travel" and "in-situ" cognitive and affective image elements. The study extends our understanding of image formation over two different points in time ("a priori" and "in situ") and also enriches the marketing scholarship by providing empirical data on the potential differences in tourists' images (international vs. domestic). It also contributes to identifying the way the different image components are perceived across different tourist groups in order to implement an effective positioning strategy. Lastly, the study's empirical findings can assist tourism authorities to enhance the image formed by domestic and international tourists visiting Linz and to subsequently increase their corresponding intention to recommend it to others. The benefit of an "in situ" study is that it is conducted in a 'real' environment and data are collected as the experience occurs (Vogt & Andereck, 2003). As such, it provides strong validity and reduces recall bias (Stewart & Hull, 1996).

# 3. Research Methods

#### 3.1 Study Setting

The setting of this study is Linz - an Austrian city situated astride the Danube River. Linz, Austria's third largest city (population 190,000), was selected as it represents a typical example of a peripheral city trying to reposition and differentiate itself from its main rivals (Vienna and Salzburg) that dominate the Austrian tourist market. As such, the outputs of this study will benefit the tourism marketing strategy of Linz and other peripheral cities. Linz's attempts to differentiate itself from Vienna and Salzburg initially started in 1985 and were quite unsuccessful till the year 2000. Its transformation from an industrial place to futureoriented cultural and technological city was facilitated by the 'Cultural Development Plan' published in 2000. Since then, a mixture of a stable economy, modern technology and culture has become the trademark of Linz (Lewonig, 2007). The city's policy is clearly oriented towards culture and technology; there are three hallmark events that dominate its annual events calendar and are considered as the cultural trademarks of Linz - the Pflasterspektakel, the Ars Electronica Festival and the Linz Cloud of Sound. Part of the city's history is associated with Adolf Hitler, who was born in the outlying village of Braunau, but grew up in Linz. During the Nazi period, Linz transformed from a small town into an industrial city with a potential to become a cultural metropolis on the Danube. After the Nazi era, the main concern of Linz's authorities was to distance themselves from the Nazi culture and Hitler, while highlighting traditionally humanist cultural values (Linz Cultural Development Plan, 2000).

# 3.2 Sampling and Data Collection

The target population of this study consisted of domestic and international tourists visiting Linz who are aged 18 years old or over. A plethora of studies on destination image have used a non-probability sampling method for tourists (e.g., Chen & Tsai, 2007; Stepchenkova & Li, 2013), due to the lack of accurate data regarding the size of the tourist population (Stepchenkova & Li, 2013). As such heterogeneous purposive sampling (Finn, Elliott-White & Walton, 2000) was employed to ensure heterogeneity and variance among the tourists participating in the study, albeit without applying a random sampling method, because of the lack of a sampling frame. Since priority was given to the representativeness of the study's participants, the data collection took place at various locations in Linz and during different days/time of the week (Bonn et al., 2005). Tourists were approached in August in the main tourist zone, where the vast majority of Linz's hotels, shops and restaurants are located. A screening question was asked to ensure that respondents have spent at least one night in Linz at the time of the survey (to exclude one-day excursionists and those who had just arrived in Linz). Although the procedure followed assists in achieving a balanced composition of respondents, it may limit the generalizability of the findings to other destinations, as is further discussed in the limitations section. The data was collected using self-administered questionnaires that were distributed by one of the researchers. The total sample consisted of 400 tourists (188 domestic tourists and 212 international tourists). The international tourist sample was perceived as mainly homogenous in terms of distance (country of origin) from Linz as the vast majority (97%) of respondents came from other European countries and only a small fraction (approximately 3%) of the sample represented the rest of the world. To validate the sampling representativeness, after the required data was collected the sample profile was compared to the characteristics of Linz's visitors in terms of their nationality.

According to statistical data published on TourMIS, foreign visitors account for between 51-53% and domestic visitors for 47% - 49% to the total number of visits to Linz. It could therefore be concluded that almost a perfect match was assured between the collected data and the official statistics on Linz's visitors' nationality.

#### 3.3 Measurement

Most studies in the tourism literature assess tourists' destination image using existing lists of attributes/characteristics, thus ignoring the uniqueness and non-replicability of destination images. To overcome this issue, this research uses a "quasi-mixed" method approach including both qualitative and quantitative techniques of data collection (see Echtner & Ritchie, 1991; Jenkins, 1999), endeavouring to capture a comprehensive image of Linz. In this approach, unstructured techniques are commonly used first to elicit the relevant destination image attributes, with researchers then using these attributes in subsequent analysis to construct surveys to investigate tourist images (O'Leary & Deegan, 2005). As such the first phase involved a qualitative exploration of Linz's destination image by eliciting its destination image attributes and dimensions (both cognitive and affective) from visitors in Linz. This technique enables to distil the constructs or attributes most appropriate to the population under study (tourists). Following Echtner and Ritchie (1993) two open-ended questions were used. The first question focused on respondents' spontaneous associations with Linz as a tourist destination (cognitive image). The aim of the second question was to gain insights into respondents' feelings and emotions in relation to Linz (affective component of Linz's image). Out of the 150 invited 88 respondents agreed to participate and answered the questions. After discarding 14 incomplete responses, the final sample consisted of 74 usable responses. The majority of the respondents (74%) were from Great Britain, Germany, Switzerland, Portugal, Italy, Cyprus, France, Poland, Bulgaria and the USA, reflecting to a

large extent the profile of international tourists in Linz. About half of the respondents were female and half were male. Conceptual content analysis was applied to analysing the collected data (Wilkinson & Birmingham, 2003). Similar words were grouped into categories with indicative labels, and frequencies of the various types of responses were recorded (see Table 1 for extracts from respondents' answers). In line with Reilly (1990), responses produced by at least 5% of the sample are common enough to be considered. This technique allowed the participants to describe Linz without being influenced by any list of predetermined attributes presented by the researcher.

#### [Insert Table 1 About Here]

Throughout this exploratory stage, Linz's cognitive destination image construct was found to have been formed through its Nazi past and Hitler, the steel industry, its architecture and the well-preserved old part of the town; of the modern face of Linz presented by its museums of Modern Art, the Brucknerhaus, its hallmark events (International Street Artist Festival and Bruckner Festival), and of the natural beauty of Postingberg and the Danube River. In terms of the affective image, Linz was described as an interesting, enjoyable, and modern place. Although the sample used in this exploratory stage could be perceived as relatively small (n = 74), the open-ended questions made it possible to elicit some of Linz's unique characteristics and to understand aspects of its individuality.

In the second phase, a questionnaire was developed based on the attributes elicited in the first phase and utilized for collecting data from the two samples of tourists visiting Linz. The cognitive image component was evaluated using, among others, Linz's architecture and old town, cultural and religious heritage and natural attractions. The affective component of

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that is, relying on respondents' memory. As such their responses might be positively or

negatively influenced by respondents' actual experience in Linz, which may result in

distorted results of Linz's "pre-travel" image. A similar constraint occurred in Martin and del

Bosque's (2007) research on the relationship between psychological factors and perceived

image of a tourist destination.

# 4. Findings

## 4.1 Respondents' Profile

The total sample consisted of 400 respondents, including 188 domestic and 212 internationals tourists. Within the domestic tourist sample females accounted for 54% and males for 46% of the respondents (see Table 2). Most of the participants were older than 46 years old (41%), employed full-time (57%), and had a secondary (43%) or academic degree (47%). Similarly, in the international tourist sample, the majority of the respondents was female (54%), older than 46 years (53%), employed full-time (58%) and had an academic degree (66%).

### [Insert Table 2 About Here]

# 4.2 The Influence of Direct Destination Experience on Tourists' Image of Linz

To test hypotheses 1-4, paired t-tests were conducted on each tourist group to identify potential significant differences in the images of Linz "a priori" and "in situ" (Table 3). The findings of the paired t-tests suggest that there were significant changes between domestic tourists' "a priori" and "in situ" images of Linz in regards to 18 of the 19 cognitive attributes and in regards to all six affective attributes studied, which provides strong evidence to support H1 and H2. For example, domestic tourists' images improved on items like architecture, the cultural heritage of the city, links to the Nazi past, and the shopping and cultural opportunities that it offers. Their affective image also improved as domestic tourists during their visit perceive Linz as more interesting and enjoyable and less boring, unpleasant and old-fashioned than they "a priori" imagined it to be. In contrast, the image of Linz deteriorated during their visit with respect to the two annual festivals (Bruckner Festival,

International Street Artist). In the international tourists' sample, significant differences were reported before and during the visit for 16 out of 19 cognitive items and for all six affective items examined, supporting H3 and H4. The greatest positive modifications in Linz's images during the visit occurred among the shopping opportunities, cultural heritage and modern art. International tourists also tend to agree now more fervently than before ("a priori") that Linz is interesting, modern and enjoyable. Linz also appears to be (during the visit) less boring, unpleasant, and old-fashioned as they have "a priori" imagined it to be. Lastly, international tourists now link less strongly Linz to the Alps (potentially due to the fact that the study was conducted over summer) and to the two international festivals (i.e. International Street Artist and Bruckner Festival).

### [Insert Table 3 About Here]

# 4.3 The Influence of Nationality on the "a priori" Image of Linz

Prior testing Hypotheses 5-8, Principal Component Analysis (PCA) was used to identify the inherent dimensions of the cognitive image scale and to reduce the complexity of the collected data (Hair, Black, Babin & Anderson, 2014). The PCA commenced with the Kaiser–Meyer–Olkin (KMO) measure of sample adequacy, the Bartlett's test of sphericity, and the anti-image correlation matrix to examine the factorability of the data. The KMO coefficient for the cognitive image scale was 0.654 (benchmark is 0.60), and the Bartlett test was significant (p < .05) (Tabachnick & Fidell, 2013). The PCA (varimax rotation) for the cognitive image component revealed the existence of six factors with the total variance explained of 62.79% suggesting a satisfactory factor solution (Table 4). The eligibility of the factor solution was also supported by eigenvalues greater than 1.0, and the absence of abnormality in the scree plot (Tabachnick & Fidell, 2013). Various criteria were used to

Please cite as: Iordanova, E. & Stylidis, D. (2017). International and Domestic Tourists' "a priori" and "in situ" Image Differences and the Impact of Direct Destination Experience on Destination Image: The Case of Linz, Austria. Current Issues in Tourism. Available Online establish the validity of the six factors: a) items needed to have factor loadings higher than 0.40 (Hair et al., 2014); b) no item which double-loaded onto multiple factors with coefficients greater than 0.40 was retained; and c) internal consistency was confirmed by estimating the Cronbach alpha value of each factor. By applying these criteria, four items (beautiful, football, bicycle paths and poor) were eliminated from further analysis due to low factor loadings. The six factors were labelled based on the items they comprised: Contemporary Culture, Natural and Built Attractions, Blemish, Activities, Events, Culture and Traditions. The internal consistency of the six factors was tested by using Cronbach's  $\alpha$ , with most values being above the recommended benchmark ( $\alpha > 0.60$ ) (Peterson, 1994), with the exemption of Activities, Events, Culture and Traditions. The lower reliability observed in these factors is above or close to the cut off of 0.50 suggested by Pedhazur and Schmelkin (1991) for factors with only a few items, as the size of alpha is determined by both the number of items in the scale and the mean inter-item correlations (Gliem & Gliem, 2003). In line with Schmitt (1996), even relatively low (e.g., .50) levels of reliability do not seriously attenuate validity coefficients. In a review of the literature on the Cronbach alpha values reported in previous studies, Jonsson and Svingby (2007) concluded that coefficients were typically in the range of .50 - .92. Given the importance of the Culture and Traditions image factor for the context of this study, a decision was made to retain this factor in the subsequent analysis.

## [Insert Table 4 About Here]

Multivariate Analysis of Variance (MANOVA) was conducted next to identify potential differences between international (n = 212) and domestic (n = 188) tourists with regards to their "a priori" images of Linz. Although researchers commonly use individual univariate t-

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### [Insert Table 5 About Here]

Discriminant analysis was conducted next to assess the classification accuracy of the two tourist groups. The canonical discriminant function extracted was significant at the .001 level (see Table 6). The canonical correlation value is .36, suggesting that the model explains a significant relationship between the function and the dependent variable (Hosany & Prayag, 2013). The classification results also indicate that the hit ratio is relatively high (64%), that is, for the sample of 400 observations, 64% (n = 256) of the sample respondents were correctly classified in their respective cluster by the discriminant functions (Hair et al., 2014).

## [Insert Table 6 About Here]

### 4.3 The Influence of Nationality on the "in situ" Image of Linz

The same statistical procedure was followed to identify potential differences across domestic and international tourists with regards to their "in situ" images of Linz. Commencing with the PCA, the measure of sampling adequacy had a value of 0.60 and Barlett's Test of Sphericity was significant (p < .001). The principal component analysis revealed the existence of six factors with eigenvalues exceeding 1 and explaining 68.55% of the total variance (Table 7). By applying the same criteria as above, five items (Danube, beautiful, football, bicycle paths, and poor) were eliminated from further analysis due to low factor loadings. All factors apart from one demonstrated convergent and discriminant validity, with the Chronbach  $\alpha$  values being equal or higher than 0.6. The factor Culture and Traditions was removed from further analysis as it exhibited a very low Cronbach alpha value ( $\alpha = 0.37$ ). The five remaining factors were labelled according to the items they comprised: Contemporary Culture, Natural and Built Attractions, Events, Blemish, and Activities.

[Insert Table 7 About Here]

MANOVA was performed next to identify potential differences between international (n = 212) and domestic (n = 188) tourists with regards to their "in situ" cognitive and affective images of Linz (H7 and H8). The MANOVA test was significant (Wilks's Lambda = .960,  $F_{(5,394)} = 3.313$ , p < .05). The findings suggest that there were statistically significant differences in the "in situ" image of Linz across the two tourist groups in regard to two out of five dimensions used to capture its cognitive city image (Table 8), partially supporting H7. International tourists strongly agree that there are cultural opportunities available in Linz including Ars Electronica, Lentos and modern art. They also disagree more than the domestic tourists that Linz can be linked to the Alps and snow/winter (Attractions). Both groups of tourists hold somewhat similar "in situ" city images of Linz regarding its Blemish past, Events and Activities. Additionally, significant differences were reported with regards to four out of six affective image attributes, leading to the confirmation of H8. International tourists, in particular, tend to agree more than the domestic ones that Linz is modern and enjoyable and to disagree more that it is boring and old-fashioned.

#### [Insert Table 8 About Here]

At the last stage, discriminant analysis was conducted to assess the classification accuracy of the two tourist groups. The canonical discriminant function extracted was significant at the .05 level (see Table 9). The canonical correlation value is .20, and the classification results indicate that the hit ratio is relatively high (62%); for the sample of 400 observations, 62% (n = 248) of the sample respondents were correctly classified in their respective cluster by the discriminant function (Hair et al., 2014).

# [Insert Table 9 About Here]

Overall, significant image differences were found with regards to Linz's image as perceived by international and domestic tourists across two different points in time ("a priori" and "in situ"). The implications of these findings to tourism theory and practice are discussed in the next section.

# **5. Discussion and Conclusion**

The aim of this study was to examine the effect of direct destination experience and nationality on both "pre-travel" and "in-situ" cognitive and affective elements of destination image. The findings suggest that a) there are significant differences in the way domestic and international tourists perceive Linz as a tourist destination, b) these image differences become evident in both the cognitive and the affective components of image, and c) direct experience with the destination positively modifies both international and domestic tourist groups' cognitive and affective images of Linz. A discussion of these findings along with the study's contribution to tourism theory and practice are following.

The study findings indicate that direct experience (actual visitation) has a considerable effect on both domestic and international tourists' images of Linz (Hypotheses 1 to 4). City image appears to change during visitation, similar to the findings of Vogt and his colleagues (1998, 2003) and Kim and Morrsion (2005). More precisely, the images of Linz seem to ameliorate during visitation for both tourist groups as a result of having direct contact/experience with the place. This corroborates researchers' proposition that visitors tend to have more realistic and differentiated images than non-visitors (Gartner, 1989; Gunn, 1972; Pearce, 1982). Additionally, it supports previous studies which have proposed that image formation is a dynamic process (Kim & Morrsion, 2005; Gallarza et al., 2002). It also appears that as tourists directly experience the destination, they become aware of, and are exposed to places and activities that they did not know about (Vogt & Andereck, 2003). For instance, the results provided evidence that Linz's dark past is no longer a burden to its image since the mean value of 'Hitler' dropped down significantly for domestic tourists during their actual

visitation in Linz. What differentiates the findings of this study, however, from past research is that the effect of direct destination experience on destination image was explored here using two distinct tourist samples (domestic, international) at two different points in time ("a priori", "in situ"), in contrast to the majority of past studies that compared (international) visitors' and non-visitors' images of a destination at a single point in time. As such, given that both Austrian's and international tourists' images of Linz significantly changed, this study provides empirical evidence that direct destination experience plays a major role in destination image formation, irrespectively of individual's nationality or distance from the destination (considering that domestic tourists are expected to visit Linz from nearby places in contrast to international tourists), playing thus as a critical role in the formation of perceived quality and satisfaction with the destination.

The results also suggest that there were significant differences among domestic and international tourists both in regards to the "a priori" cognitive and affective city image (H5 and H6) and the "in situ" cognitive and affective image of Linz (H7 and H8). These findings are in line with the study of Bonn et al. (2005), which also reported differences between international and domestic tourists' perceptions of Florida. Other studies too have also highlighted the role of nationality in formulating tourists' perceptions of places by using respondents' distance from the destination (Fakeye & Crompton, 1991; Beerli & Martin, 2004; Hsu et al., 2004; Sahin & Baloglu, 2011). Sahin and Baloglu, (2011) study, for example, shows that first-time visitors from different geographic and cultural backgrounds have different perceptions of the image of Istanbul. The current study extends previous research in two ways; first, it revealed that the two tourist groups have different perceptions of both cognitive and affective components of image, whereas the study of Bonn et al. (2005) exclusively focused on cognitive evaluations. Second, this research unveiled that the image

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Austrian and international tourists, more precisely, appear to perceive differently a number of Linz's attributes. Internationals tourists rated some of Linz's "a priori" image attributes including Ars Electronica and Lentos higher than the Austrians, finding which indicates that the Austrians probably tend to underestimate Linz's central place on the European cultural map of Modern Art. This finding contradicts Reilly's study (1990), which found that respondents living far away from a destination were usually lacking a vivid image of it. On the other hand, Austrians were more likely to associate Linz with Hitler than the international tourists potentially due to their higher level of familiarity with or knowledge of local history. Similarly, in terms of Linz's "in situ" image, international tourists had stronger associations of Linz with Modern Art and cultural heritage than the domestic ones. Arguably, the findings here indicate that the assumption that our understanding of international tourists' image and behaviour is also applicable to domestic tourists is problematic.

This study addressed relevant, but still under-researched issues that play a critical role in the process of destination image formation and development and makes several contributions to the existing body of literature on destination image. First, the study fills a gap in the existing literature concerning the role nationality (considered here as international vs. domestic) plays in the process of destination image formation and development. The results provide empirical evidence to suggest that there are significant differences between domestic and international tourists in terms of the way they perceive cities as tourist destinations both

"a priori" and "in situ." Nationality as such not only shapes "pre-travel" destination images (as it has been understood so far), but also penetrates to the next phase of image formation ("in situ") and shapes both cognitive and affective image components. These findings provoke thoughts about the penetration power some image determinants (i.e., nationality) might have and exercise over the different stages of destination image formation and the possible repercussions this could have on the city image concept. Another contribution to theory is that direct destination experience appeared to positively influence both cognitive and affective images of Linz irrespectively of individual's nationality, further strengthening the link between actual visitation and image. Overall, the findings of this paper strengthen the idea that nationality and direct destination experience are important destination image determinants affecting both cognitive and affective image components at two different time spans. It could be, therefore, concluded that the complexity of destination image formation process is not only related to its multi-layered and dynamic nature but also to respondents' characteristics and past experience, our knowledge of which was enhanced by this research.

The study findings have clear ties to marketing and promotion of city destinations including Linz. A profound understanding of destination image is of significant importance for destinations striving to improve and strengthen their positioning in the tourism market. In line with Baloglu and McCleary (1999), the development of a positive image is a pre-requisite for any destination to experience success in tourism. Tourist destinations should, therefore, formulate a positive image, derived from the cognitive and affective image evaluations, and build strong destination brands to increase word of mouth and to attract new tourists to the destination (Qu et al., 2011). The obtained results could be of interest to Linz's destination marketers as they identify through the eyes of Linz's visitors: a) its' image strengths to ensure its competitive success, and b) its' image weaknesses requiring further investments.

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This research further highlights the practical importance of understanding the domestic tourism segment. Considering that domestic tourists share the same background as the local residents, the latter's active involvement in promoting domestic tourism becomes pivotal for several reasons. First, residents can serve as a primary source of information during the tourists' stay (Gitelson & Kerstetter, 1994). Second, regarding visits to friends and relatives (the VFR market), residents also serve as an important source of information for their guests. Studies suggest that friends and relatives living in the destination constitute the primary motivation for a number of tourists' visits (e.g., Hsu et al., 2004). Therefore, by also cultivating a positive image of the destination among its residents through internal marketing campaigns, destination managers can improve domestic tourists' destination image and onsite experience (Stylidis et al., 2015).

This study is not free from conceptual and methodological limitations. First of all, given that it was conducted on a single setting, the results are specific to the context of Linz. Replicating the study in different contexts would help to cross-validate its findings. Second, the data were collected during a particular time period (over summer), which might explain why the majority of respondents did not associate Linz with winter sports, snow and the Alps, even though Austria is traditionally perceived as a popular winter destination. As such the results should be considered as a "snapshot" of Linz's image and a longitudinal study should be conducted in the future. Next, the vast majority of international tourists (97%) came from other European countries but their image was perceived as rather homogenous given that the scope of this study was to contrast international tourists' image of Linz with that of domestic tourists. Differences might exist among the different nationalities included in the same tourist group. Future studies should compare international vs. domestic tourists' images using one homogenous sample of international tourists. Another limitation is that the "a priori" image of Linz was not examined directly, but respondents were asked to recall their associations with Linz before visiting it, which might have got blurred after their actual experience in Linz. This commonly used approach (see Kim & Morrsion, 2005) was adopted as it was not feasible to identify a sample of potential visitors of Linz from different regions, capture their "a priori" image of Linz and then follow them throughout their actual experience to measure their "in situ" image. Next, other important measures were excluded from the analysis such as length of stay in Linz, previous visitation at the destination and destination personality. Similarly, due to the nature of the collected data the conative component of image was not studied, considered being beyond the scope of this paper. Future research should be conducted to understand domestic and international tourists' images across the three stages of image formation considering also destination personality, tourists' future behavioural intentions and level of familiarity with the destination.

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Table 1. Extracts from respondents' answers\* (explorative phase)

Master category	Extracts from respondents' answers
Cognitive Image	
Beautiful	"provincial Austrian town with beautiful, picturesque landscape"
Alps	"Linz, Linzisn't it in the Alps?"
The Danube	"romantic sunsets in the Danube Park" "provincial town on the Danube"
Steel industry	"Linz is a well-developed town, which relies mainly on its steel industry as much as they try to deny that"
	"I remember the massive factories we passed by the first time we visited Linz a few years ago"
Snow/Winter	"Christmas market, lots of snow and fun
	Snow and holiday"
Affective Image	
Unpleasant	"darkness and poverty like in the books of Dickens"
	"Austrian order, therefore, quite unpleasant feelings"
	"unpleasant emotions, order and discipline"
Enjoyable	" modern and enjoyable"
	"joy, pleasure"

<sup>\*</sup>Based on a sample of 74 respondents

Table 2. Respondents' profile

	Domestic tourists $n = 188 (47\%)$	International tourists n = 212 (53%)	Total sample $n = 400$
Gender			
Female	53.7%	53.8%	54%
Male	46.3%	46.2%	46%
Age			
18-25	11.7%	5.7%	8.5%
26-35	22.3 %	19.3%	20.8%
36-45	25.0%	22.1%	23.5%
46-55	28.2%	30.6%	29.5%
56+	12.8%	22.2%	17.8%
<b>Employment</b>			
Full-time	57.4%	57.5%	57.5%
Part-time	16.0%	16.5%	16.3%
Student	9.6%	5.2%	7.3%
Retired	11.7%	18.9%	15.5%
Other	5.3%	1.9%	3.5%
Education			
Primary	10.1%	4.7%	7.3%
Secondary	42.6%	29.2%	35.5%
Tertiary	47.3%	66.0%	57.3%

Table 3. International and domestic tourists' "a priori" and "in situ" image of Linz

	Domestic (N=188)			Inte	ernationa	al (N=212	)	
	A priori	In situ	t value	Sig.	A priori	In situ	t-value	Sig.
<b>Cognitive mage</b>	-	-	<del>-</del>	-		•	-	
Beautiful	2.13	1.79	4.67	<.001	2.02	1.64	5.44	<.001
Snow/winter	3.11	4.34	-11.80	<.001	3.57	4.63	-10.30	<.001
Alps	3.23	3.82	-5.70	<.001	3.72	4.14	-4.19	<.001
The Danube	2.13	1.69	5.60	<.001	2.13	1.78	3.65	<.001
Austrian Cuisine	1.75	1.34	5.87	<.001	1.77	1.30	7.70	<.001
Shopping	2.23	1.54	9.72	<.001	2.55	1.56	12.90	<.001
Football	4.34	4.63	-3.28	.001	5.19	5.16	.476	.634
Bicycle paths	2.75	1.65	10.95	<.001	3.26	1.75	13.62	<.001
Postlingberg	1.99	1.46	7.07	<.001	2.30	1.38	10.25	<.001
Bruckner Festival	2.40	2.74	-4.63	<.001	2.68	2.86	-2.08	.038
Int. Street Artist	2.85	3.14	-3.42	.001	3.00	3.24	-2.65	.009
Cultural Heritage	1.68	1.31	6.14	<.001	1.51	1.12	8.52	<.001
Ars Electronica	2.37	1.50	9.73	<.001	2.16	1.39	10.01	<.001
Lentos	2.39	1.62	8.27	<.001	2.13	1.47	8.47	<.001
Modern Art	2.79	1.82	8.69	<.001	2.63	1.56	10.72	<.001
Architecture	1.68	1.29	11.25	<.001	1.57	1.21	9.83	<.001
Steel Industry	2.30	3.18	-8.39	<.001	3.33	3.47	-1.42	.155
Hitler	2.11	2.58	-5.01	<.001	2.45	2.59	-1.675	.095
Poor	4.66	4.77	-1.60	.110	4.45	4.83	-6.05	<.001
Affective Image								
Boring	4.03	4.55	-5.59	<.001	4.17	4.76	-8.17	<.001
Unpleasant	4.58	4.79	-3.27	.001	4.62	4.87	-4.99	<.001
Old-fashioned	2.69	3.36	-6.84	<.001	3.08	3.61	-5.05	<.001
Interesting	2.19	1.97	3.31	<.001	2.14	1.91	3.94	<.001
Modern	2.97	2.15	10.31	<.001	2.77	2.02	9.28	<.001
Enjoyable	2.13	1.98	2.05	.042	2.08	1.77	4.44	<.001

Scale: '1' strongly agree - '6' strongly disagree

Table 4. PCA for the cognitive a-priori city image

Factor/Item	Factor	Variance	Cronbach	
	Loading	Explained	Alpha	
Factor I: Contemporary		20.884	.86	
Culture		20.004	.00	
Lentos	.890			
Modern Art	.863			
Ars Electronica Center	.823			
Factor II: Natural and		13.884	.85	
<b>Built Attractions</b>		13.004	.65	
Alps	.906			
Snow/Winter	.897			
Factor III: Blemish		8.733	.72	
Hitler	.846			
Steel Industry	.816			
Factor IV: Activities		8.407	.58	
Shopping	.752			
Postlingberg	.633			
Factor V: Events		6.913	.52	
Bruckner Festival	.606			
The Danube	.502			
International Street Artist	.503			
Festival	.303			
Factor VI: Culture and		6.489	.47	
Traditions		0.469	.47	
Cultural Heritage	.722			
Austrian Cuisine	.750			
Architecture	.410			

Total variance explained: 62.79%.

Table 5. Multivariate analysis of variance (a-priori city image)

Image Components	Domestic	International	T .1 .	C!		
& Dimensions/Items	n= 188	n= 212	F-value	Significance		
<b>Cognitive Image</b>						
Attractions	3.17 <sup>a</sup>	3.65 <sup>b</sup>	9.134	.003		
Blemish	2.21 <sup>a</sup>	2.89 <sup>b</sup>	37.164	.000		
Contemporary						
Culture	2.52	2.31	2.721	.100		
Events	1.70	1.62	2.369	.125		
Culture and						
Traditions	2.47	2.61	1.594	.208		
Activities	2.11 <sup>a</sup>	2.43 <sup>b</sup>	10.220	.002		
Affective Image						
Boring	4.03	4.17	2.010	.157		
Unpleasant	4.58	4.62	.255	.614		
Old-fashioned	2.69 <sup>a</sup>	$3.08^{b}$	13.768	.000		
Interesting	2.19	2.14	.517	.472		
Modern	2.97 <sup>a</sup>	2.77 <sup>b</sup>	4.080	.044		
Enjoyable	2.13	2.08	.342	.559		

a,b Mean scores with different letters are significantly different from each other at 0.05 level. Scale: '1' strongly agree to '6' strongly disagree

Table 6. Discriminant analysis (a priori city image)

<b>Discriminant Functions Results</b>					
Discriminant Functions	Eigenvalue	Cannonical correlation	Wilk's lambda	Chi- square	Significance
1	.144	.36	.874	53.22	.000
Classification results					
Actual	No of	Predicted group membership			
group	cases	Domestic		Internatio	onal
Domestic	188	117		71	
Domestic	100	(62%)		(38%)	
T: 1	212	73		139	
International	212	(34%)		(66%)	

Hit-ratio: 64%

Table 7. PCA for the cognitive in-situ city image

Factor/Item	Factor Loading	Variance Explained	Cronbach Alpha
Factor I: Contemporary Culture		17.432	.76
Lentos	.864		
Modern Art	.792		
Ars Electronica Center	.770		
Factor II: Natural and Built Attractions		13.032	.77
Alps	.877		
Snow/Winter	.871		
Factor III: Events		11.097	.68
Bruckner Festival	.800		
International Street Artist Festival	.844		
Factor V: Blemish		8.987	.64
Hitler	.853		
Steel Industry	.830		
Factor V: Activities		7.547	.61
Shopping	.804		
Postlingberg	.842		

Total variance explained: 68.55%.

Table 8. Multivariate analysis of variance (in-situ city image)

Image Components & Dimensions/Items	Domestic n= 188	International n= 212	F-value	Significance
<b>Cognitive Image</b>				
Attractions	$4.08^{a}$	4.38 <sup>b</sup>	7.158	.008
Blemish	2.88	3.03	2.383	.123
Contemporary Culture	1.65 <sup>a</sup>	1.48 <sup>b</sup>	6.540	.011
Events	2.94	3.05	.559	.455
Activities	1.50	1.47	.346	.557
Affective Image				
Boring	4.55 <sup>a</sup>	4.76 <sup>b</sup>	7.213	.008
Unpleasant	4.79	4.87	2.919	.088
Old-fashioned	3.36 <sup>a</sup>	3.61 <sup>b</sup>	5.865	.016
Interesting	1.97	1.91	.842	.360
Modern	2.15 <sup>a</sup>	$2.02^{b}$	4.297	.039
Enjoyable	1.98 <sup>a</sup>	1.77 <sup>b</sup>	10.327	.001

<sup>&</sup>lt;sup>a,b</sup> Mean scores with different letters are significantly different from each other at 0.05 level. Scale: '1' strongly agree to '6' strongly disagree

Table 9. Discriminant analysis (in situ city image)

<b>Discriminant Functions Results</b>					
Discriminant Functions	Eigenvalue	Cannonical correlation	Wilk's lambda	Chi- square	Significance
1	.042	.201	.960	16.29	.006
Classification results					
Actual	No of	Predicted group membership			
group	cases	Domestic		Internatio	onal
Domestic	188	80		108	
Domestic	100	(43%)		(57%)	
T 1	212	46		166	
International	212	(22%)		(78%)	

Hit-ratio: 62%