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MOTION PICTURE IMPACTS ON DESTINATION IMAGES

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Abstract: This study employed an experimental design to assess the extent to which viewing a specific popular motion picture altered cognitive and affective images of the place it depicted, as well as familiarity with, and interest in visiting it. A conceptual framework, which introduces the concept of vicarious experience through empathy, is introduced, and the role of empathy in explaining perceptual change is explored. Implications of the study pertain to the development of theoretical understandings about the relationships of movies—as a form of popular culture—to destination images. Additionally, marketing ideas associated with these relationships are discussed. **Keywords:** popular culture, motion pictures, destination image, empathy, vicarious experience. © 2003 Published by Elsevier Science Ltd.

Résumé: Les impacts du cinéma sur les images de destination. Cette étude a utilisé un modèle expérimental pour évaluer le degré auquel la vision d'un film populaire déterminé modifierait les images cognitives et affectives du lieu qu'il représentait ainsi que sa familiarité et l'intérêt pour visiter ce lieu. On présente un cadre conceptuel basé sur la notion de l'expérience par procuration liée à l'empathie, et on examine le rôle de l'empathie pour expliquer le changement de perceptions. Les implications de l'étude se rapportent au développement de la compréhension théorique de la relation entre cinéma—en tant que forme de la culture populaire—et les images de destination. De plus, on présente des idées de marketing associées à cette relation. **Mots-clés**: culture populaire, cinéma, image de destination, empathie, expérience par procuration. © 2003 Published by Elsevier Science Ltd.

INTRODUCTION

Image has emerged as a crucial marketing concept in the tourism industry. It influences tourism related attitudes and behaviors variously, by confirming/reinforcing existing, creating new, and changing them (Seaton 1989). In the tourism field, image research has reflected several different perspectives. These include the relationship of image to destination choice (Fakeye and Crompton 1991; Goodrich 1978; Mayo and Jarvis 1981), the image formation process (Baloglu and McClearly 1999; Fakeye and Crompton 1991; Gartner 1993; Gunn

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1972), image modification and change (Chon 1991; Pearce 1982), and image measurement (Echtner and Brent Ritchie 1991; Gartner 1993).

This paper is concerned with the process of image formation. Several researchers have suggested different frameworks for understanding this process. Gunn (1972), one of the first researchers to conceptualize the image formation process, separated this process into two types: organic and induced images. The former are formed from sources not directly associated with tourism interests, such as newspaper reports and movies; induced images derive from the conscious effort of marketers to develop, promote and advertise their destinations. Gartner (1993) viewed the image formation process as a continuum consisting of eight different agents: overt induced I agent (referring to traditional forms of advertising); overt induced II agent (information received from tour operators); covert induced I agent (second-party endorsement of products through traditional forms of advertising); covert induced II agent (second-party endorsement through unbiased reports such as newspaper articles); autonomous agent (news and popular culture); unsolicited organic agent (unsolicited information received from friends and relatives); solicited organic agent (solicited information received from friends and relatives); and organic agent (actual visitation).

Among these, the role of autonomous image formation agents appears to have particularly powerful effects on destination image formation. News coverage and popular culture (as in films, television programs, and literature) can provide substantial information about a place in a short period of time. Additionally, people are likely to evaluate the information as relatively unbiased when compared to traditional advertising. Further, news and popular culture products are so deeply embedded in every day life that they are likely to have high market penetration. Thus, portrayals of places in news and popular culture can alter an area's image dramatically, even in a short period of time. Although few empirical studies of effects of popular culture on image formation have been conducted, considerable anecdotal evidence suggests a strong relationship. For example, it has been suggested that the Disney-driven culture, consisting of films, songs, and resorts, has impacted Americans' way of seeing nature and place (Margaret 1996).

Motion pictures are an important element of popular culture. They impact on many people in a short period and few would deny that movie-going is a major leisure activity throughout the world. According to Brown and Singhal (1993), the impact of popular films and television programs on individual and societal beliefs and behaviors will continue to increase as cable television and video use diffuse rapidly. Likewise, Butler (1990) argued that what is shown in movies, videos, and television will become even more important than print media in shaping images of, and visitation to, places, due to expanding accessibility and high credibility of these information sources. Similarly, Schofield (1996) suggested that contemporary tourists' organic images of places are shaped through the vicarious consumption of film and television without the perceived bias of promotional material.

Several researchers have found that certain motion pictures increased the awareness of the places they depicted and had touristinducing effects (Riley and Van Doren 1992; Tooke and Barker 1996; Riley, Baker and Van Doren 1998). For example, the Scottish Tourist Board conducted a survey in the Stirling area depicted in the film Braveheart. The results of this research indicated that seeing the film had a considerable influence on tourists' decisions to come to the Stirling area and to visit certain attractions and destinations portrayed in the film (Stewart 1997). Recognizing that movies can enhance awareness of places and affect decision-making processes, marketers are increasingly working with film producers to promote their destinations as possible film locations (The Economist 1998; Rosen 1997; Seaton and Hay 1998). However, despite recognition that place images can be developed through depiction in film, the processes by which motion pictures influence destination images and related decision-making have not been widely examined. Accordingly, the study reported in this paper explored how popular motion pictures, as autonomous image formation agents, influence viewers' perceptions of places they portrayed.

POPULAR MOTION PICTURES AND DESTINATION IMAGES

Despite its importance in understanding and predicting tourist behavior, the concept of image has not been understood in a unified way. Pearce commented that "image is one of those terms that will not go away, a term with vague and shifting meanings" (1988:162). Numerous scholars have offered somewhat different definitions of destination image. Hunt (1975) described it as perceptions held by potential tourists about an area. Crompton (1979) defined image as the sum of beliefs, impressions, ideas, and perceptions that people hold of objects, behaviors, and events. More recently, Echtner and Ritchie proposed that "image is not only the individual traits or qualities but also the total impression an entity makes on the minds of others" (1991:4). Collectively, it seems that most such literature describes a totality of impressions, beliefs, ideas, expectations, and feelings accumulated towards a place over time.

One of the most significant roles of destination image is its impact on the tourism decision-making process. Many researchers have clearly illustrated that perceptions of destinations and purchase decisions are positively correlated (Mayo 1973; Mayo and Jarvis 1981), indicating that the image of an area is a critical selection factor (Woodside and Lysonski 1989). Because of its importance in predicting tourism behavior, numerous studies have been conducted. Topics that have been studied include the components of imagery (Dann 1996; Gartner 1993), relationships between actual visitation and images (Ahmed 1991; Chon 1991; Milman and Pizam 1995; Oppermann 1996), effects of geographic distance (Crompton 1979; Fakeye and Crompton 1991; Hunt 1975), influences of news coverage and cultural events (Anderson, Prentice and Guerin 1997; Gartner and Shen 1992; Prentice and Anderson 2000), and the destination images held by tourism interest groups other than tourists (Alhemoud and Armstrong 1996; McLellan and Foushee 1983; Oppermann 1996; Schroeder 1996).

Image and Popular Culture

Popular culture encompasses film, literature, song, art, photography, and other sorts of media, including mass media, which convey and reflect widely accepted values and symbols. Unlike elite or fringe culture, which influences small elements of a population, popular culture reinforces and reflects patterns of communication and consumption for a mass audience. Its role in building place imagery in the context of tourism has been clearly expressed by Urry:

Places are chosen to be gazed upon because there is an anticipation.... Such anticipation is constructed and sustained through a variety of non-tourist practices, such as film, TV, literature, magazines, records and videos, which construct and reinforce that gaze...the viewing of tourist sights often involves different forms of social patterning, with a much greater sensitivity to visual elements of landscape or townscape than is normally found in everyday life. People linger over such gaze which is then visually objectified or captured through photographs, postcards, films, models and so on. These enable the gaze to be endlessly reproduced and recaptured (1990:3).

As Urry suggests, the symbolic domain of popular culture is important to the construction of place imagery. Influences of various forms of popular culture on place images have been studied. Butler (1990) pointed to the historical importance of oral and literary media as the primary ways that people became aware of places beyond their immediate world of direct experience, prior to electronic media. Herbert (1996); Newby (1981), and Squire (1994, 1992) have specifically explored the role of literature. Seaton (1998) referred to the ways that "imaginative literature" influenced images of, and travel to, Scotland as early as the 1700s. Today, literature not only plays a critical role in directly shaping place images, but also fosters the creation of films, songs, plays, and tourism promotions.

As film and television viewing continues to expand, so too will their influence on place images. Although those developed through these media may be artificial, they influence tourism marketers and consumers to a great extent. As noted by Morgan and Pritchard, the power of constructed reality is likely to dominate any sense of objective reality. They contend that "in some cases, depiction on television may even alter the reality of a place and television shows have been catalysts for the recreation of places as living environments and tourism sites" (Morgan and Pritchard 1998:71). That is, the popular view of a place offered by media may prompt that place to recreate its own identity in this image. Hall (1997) refers to such dynamics as part of the "the circuit of culture". In the circuit of culture, language, including the visual language of television, films, and other mass media, provides representations that produce meanings. These meanings regulate social practices, influence people's conduct, and consequently have real practical effects. In particular, movies, as visual language, have

been one of the major vehicles to construct and transmit meaning, often of places with which people do not have first hand experience.

Conceptual Framework

Although popular motion pictures appear to alter visitation to tourism areas, there has been little empirical investigation of the ways that they affect place images and destination choices. Better theoretical understanding of the impacts of movies on destination perceptions will enhance knowledge about the image formation process as it relates to popular culture and bridge the gap between intuitive belief and empirical evidence. The study reported here contributes to this understanding.

A conceptual framework that describes relationships between movie viewing and selected destination-related constructs is proposed and tested. The constructs are destination images, as well as familiarity and interest in visiting. Two components of destination images are explored: the cognitive which describes beliefs about place attributes and the affective which suggests emotions evoked by a place. The concept of empathy, which provides for vicarious experience with a place, is introduced and explored as a linkage between movie viewing and the other tourism-related constructs.

Cognitive and Affective Components. Destination images have been described as consisting of both cognitive and affective components (Baloglu and Brinberg 1997; Gartner 1993; Dann 1996). Gartner (1993) regarded the former as the evaluation of the known attributes of the object. The latter refers to subjective feelings about the object (Baloglu and Brinberg 1997). Consistent with these definitions, studies on affective qualities have focused on emotional responses to places and environmental features, while the other have focused on the evaluation of physical attributes of places.

Environmental psychology literature provides a conceptual understanding of the affective component of places (Russel 1980; Russel and Pratt 1980; Russel and Snodgrass 1987). The first study by Russel argued that an affective state occurs only as the final result of the cognitive process. Information about an environment is first interpreted and made meaningful cognitively, then used to categorize the internal, emotional state. That is, interpretation of information rather than information itself produces an affective state. The 1987 study argued that affective quality of places plays a very crucial role in everyday decision-making, particularly when a place itself becomes an object of choice. Thus, in tourism contexts, evaluation of affective qualities of places might become even more important than objective, perceptible properties of places.

According to Gartner (1993), the interrelationship of cognitive and affective image components eventually determines the predisposition for visiting a destination. Despite the importance of both, most destination image studies have emphasized the cognitive component by focusing on the tangible qualities of places. Only a few (Baloglu and Brinberg 1997; Baloglu and McClearly 2000) have attempted to measure the affective component of places.

Vicarious Experience through Movie Viewing. As much of the destination image literature reveals, actual visitation to a place often causes people to changes their images of it. After they have visited a place, they tend to gain more complex cognitive knowledge about it. Most researchers seem to presume that people can experience a destination only through actual visitation, which leads to forming more realistic images of it. However, much cinematic literature implicitly suggests that people can experience a place vicariously by identifying with the characters (Metz 1982). According to the latter source, a film provides viewers perceptual hallucination through vision and sound reproducing systems. By following the electronic eye that represents the perspectives of various characters in the film, spectators identify themselves with the film characters. Thus, the cinema may be seen as a forum that offers a cast of characters from among whom the spectator chooses a party for identification (Friedberg 1990).

The notion of "vicarious experience" can be understood through the concept of empathy. This term suggests a visceral feeling about someone else's life which allows an individual to participate in the "posture, motion, and sensations" of someone or something other than the self (Stern 1994). This empathic response is likely to occur when people watch dramatic events. Iser (1978) suggests that plot and character, fundamental elements of drama, engage the viewer's imagination and empathy. Often, those exposed to drama completely immerse themselves the situation (albeit artificial) and react to the actors as if they were real persons in their immediate environment.

In advertising research, the effectiveness of advertising drama on eliciting empathic responses from viewers has been widely acknowledged. Viewers come to understand the product experiences portrayed in advertisements by vicarious participation in the experiences of advertisement characters (Boller 1990). Deighton and Hoch (1993) identified three ways that advertising dramas persuade viewers: by drawing audiences into an experiential situation, by engendering empathic emotional responses, and by stimulating inference. The level of empathic experience with advertising drama is often measured in terms of how much viewers believed they vicariously participated in the experiences of advertisement characters. Empirical results suggest that the level is related to the attitude toward the brand featured in the advertisements (Boller 1990; Boller and Olson 1991).

In certain types of place-oriented movies, viewers are offered the opportunity to learn about the place by imaginatively participating in the place-related experiences of the characters. Thus, the audience exposed to a film should not be regarded as a mere observer but as an active information processor, vicariously experiencing the world in the film. In this sense, it is not unreasonable to consider vicarious experiences with a destination featured in a film as another type of destination experience. As suggested by the advertising literature, the level of empathic involvement in movie watching represents how intensive the experience with the place may be. Thus, it can be inferred that the level of empathic involvement with film characters can affect the perceptions viewers have of the place depicted in the film.

Familiarity. Movies familiarize audiences with places and attractions featured in them. Riley and Van Doren contended that "Extended exposure to attractions through the medium of film allows potential tourists to gather information and vicarious knowledge, therefore lowering the anxiety levels caused by anticipated risk" (1992:269). Thus, it is proposed that observing a movie can increase the degree of familiarity with the places it portrays.

As tourists become more familiar with a destination, they are more likely to have specific knowledge about holiday opportunities. This knowledge can provide a feeling of security and comfort, which can lead to increased confidence in destination choice and an actual vacation experience less threatening and more comfortable (Olsen, McAlexander and Roberts 1986). However, as noted by MacKay and Fesenmaier (1997) familiarity might also have negative effects. They introduced the concept of "optimal familiarity", indicating that destination familiarity and attractiveness are positively related to a point, after which they are negatively related because the novelty of travel is reduced.

In marketing literature, familiarity has been found to be an important factor influencing consumers' decision-making process. Laroche, Kim and Zhou (1996) found that knowledge of brand influences a consumer's attitudes toward it, which in turn affects his/her intention to buy. Wedel, Vries, Bijimolt, Krijnen and Leeflang (1996) noted that a consumer's familiarity with a brand affects perceptions of its attributes, with those who are more familiar with it likely to use more complex attributes in their decision-making.

Despite widespread acknowledgement of the importance of familiarity to tourism decision-making, there is neither unified agreement nor enough discussion about the ways familiarity can be defined. Most of the literature equates familiarity with a destination as previous visitation (Milman and Pizam 1995). More recently, Baloglu (2001) critiqued previous approaches to the destination familiarity concept and proposed that experiential (previous exposure) and informational (amount of information used) dimensions be incorporated. Although he used only a behavioral measure of familiarity in his study, he points to the need to examine multidimensional aspects of human experience and the variety of ways that people may develop a cognitive understanding and affective feeling toward a place. For this reason, the underlying assumption, adopted in previous literature, that people with previous visit experience are familiar with the place and those without such exposure are not, does not appear to be suitable to capture varying degrees and kinds of human experience. Thus, in this study, the concept of familiarity was treated as an attitudinal variable.

As previously mentioned, popular motion pictures and television programs have been linked to increases in tourist numbers at places they depict (Corliss 1999; Riley et al 1998; Riley and Van Doren 1992; Tooke and Baker 1996; Watson and Galle 2000). This suggests that these media can be a catalyst of tourism interest and demand by stimulating people's curiosity for filmed locations. Thus, the impact of moviewatching on the level of interest in visiting such places was also integrated into this study.

Research Hypotheses and Study Methods

Based on the conceptual framework described in this study, five hypotheses were considered:

Ha 1: Perceived destination images of a place will be significantly different between subjects exposed to the film and those not.

Ha 2: Interest in visiting the place depicted in a selected film will be significantly different between subjects exposed to the film and not.

Ha 3: The degree of empathic involvement with film characters will be significantly related to perceived destination images.

Ha 4: The degree of empathic involvement with film characters will be positively related to the degree of perceived familiarity with the place depicted in a selected film.

Ha 5: The perceived degree of familiarity with the destination will be significantly higher for subjects exposed to a selected film than those not.

The study was conducted using a posttest only control group experimental design. Unlike some such procedures, a pretest is not included in this design (Campbell and Stanley 1963). These latter are often implemented because it is difficult giving up "knowing for sure" that the experimental and control groups are equal before the experimental treatment. However equality of the subjects can be accomplished through random assignment of them. An advantage of this study's design is that it eliminates pretesting effects, including effects of prior observation on later observation and of potential sensitization of subjects to experimental manipulation (Parasuraman 1986). Since these effects might have significantly distorted the results of this study, the posttest only control group design was deemed desirable for the study's validity.

The experimental and control treatments were major motion pictures. A popular motion picture was defined as a film produced for the entertainment of the general public employing plot and characters. Considering the possible preferences of subjects (college students) and purpose (to identify the impacts of a movie on place images), place oriented movies which were likely to appeal the students' taste were used as a major criterion. Accordingly, the movie *Before Sunrise*, released at theaters in 1995, was selected as the experimental treatment. Insights from two focus groups and a pretest helped with the selection of this film. The movie depicts the romantic experiences of a young American man and a young French woman, both University students, who meet on a train, get off together in Vienna, and spend a day exploring Vienna and falling in love. Throughout the movie, many of Vienna's historical and cultural attractions provide a background to the interactions of the young tourists. Thus, perceptual changes associated with Vienna were of primary interest to this study. For the control group, the movie *Groundhog Day* was selected. This movie was shot in a small town in Pennsylvania and did not contain any material that could confound the image of Vienna.

The sample size needed for this experiment was determined using power analysis. Ninety subjects were required to analyze the data at a 5% of α level and 95% power level with a two-tailed *t*-test, using an effect size .50 (Kraemer and Thiemann 1988). However, considering the possibility of losing subjects, such as through "no-shows" and invalid questionnaires, a larger sample size was preferred. Thus, 109 undergraduate students who had not previously viewed the movie *Before Sunrise* were selected from a film introduction class at a major US university. Those who had previously visited Vienna were not controlled before selection of samples so as to disguise the intent of the study before the experiment. The 109 subjects were assigned to two groups (experimental and control) using a randomization table. As a result, the experimental and control groups consisted of 55 and 54 students, respectively.

The two groups watched their movies concurrently in two different classrooms at a multi-media center equipped with theater quality screen and sound. Subjects completed a questionnaire immediately following the movie. Due to incomplete questionnaires (10 subjects), previous visitation to Vienna (5 subjects), and incomplete participation in the experiment (2 subjects), a total of 17 were dropped from the study sample. Because the exclusion of those subjects was not due to the nature of experimental manipulations, it is not believed that this significantly affected the validity of study design. Consequently, 92 usable responses (53 experimental and 39 control) were available at the end of the experiment, meeting the criteria for statistical estimation for data analysis. No statistically significant differences were found between the two groups in terms of age and grade level (most were in their first or second year of university), though a chi-square test showed that the control group had a significantly higher number of female subjects. In order to identify the possible effects of gender on the results of study, two-way ANOVA tests were run on all the dependent variables. The results indicated that there were neither significant gender main effects nor gender-group interactive effects on the dependent variables, which eliminated the possibility that unequally distributed gender might bias the results of the study.

To measure the cognitive component of participants' images of Vienna, the scale items developed by Baloglu and McClearly (1999) were used with some modifications. These items refer to historical and natural attractions, atmosphere of the destination, and lifestyle of local people. After some changes in wording, 13 image attributes, which were measured using a five-point Likert type scale, were included in the questionnaire.

Affective evaluations of Vienna were measured using earlier scales (Russel 1980; Russel and Pratt 1980; Russel and Snodgrass 1987). Their utility to the study of destinations has been explored by Baloglu and

Brinberg (1997). Four 10-item scales assessed the following bipolar affective dimensions of places: arousing-sleepy, exciting-gloomy, pleasant-unpleasant, and relaxing-distressing. As suggested by Russel and his colleagues, eight interval positions were provided for rating the extent to which each adjective described feelings towards Vienna. Subjects' responses to negatively keyed items (such as sleepy, gloomy, unpleasant, and distressing) were multiplied by -1, and all responses within a single dimension were then summed. This procedure produced the four 10-item scales.

Empathy was measured using an eight-item, five-point Likert scale known as the VEDA (Viewer Empathy In Response To Drama Ads) scale (Boller 1990; Boller and Olson 1991). Its original scale consists of items such as "While watching the commercial, I felt as if the characters' thoughts and feelings were my own." The wording of these items was changed to fit into the movie-viewing context rather than the advertisement-viewing situation. Scores on each of the individual items were summed to create the final measure.

Familiarity with Vienna was measured using a four item seven-point bipolar scale that focused on the physical environment and Viennase lifestyle. The selection and wording of items were determined through a discussion with expert panel members, comprised of academicians experienced with scale development. The final variable, level of interest in visiting Vienna, was measured using a one item 10-point bipolar scale.

Results: Variables and Descriptive Findings

Cognitive Image. Principal components analysis with varimax rotation was performed on the cognitive image items to identify dimensions underlying these 13 items. To examine first the suitability of the data for factor analysis, Kaiser's measures of sampling adequacy were checked for the overall data set and each variable (Stevens 1996). Overall, this was .748, which is acceptable (Kaiser 1974). However, one item was unacceptable (.51; "Good Value for Travel Expenditure") and was eliminated, thereby increasing the overall adequacy measurement to .773.

The remaining 12 items were entered into the principal components analysis. According to statistical criteria, an eigenvalue of 1.0 was utilized for factor extraction and loadings of .50 were used for item inclusion (Carmines and Zeller 1979; Stevens 1996). One item (good climate) was dropped because of a low factor loading score (.43). The exclusion of the item increased the level of variance explained from 56.20% to 59.21%. Thus, the 11 cognitive image items from the questionnaire resulted in three factors that accounted for 59.21% of the total variance (Table 1). Factors were labeled based on highly loaded items and the common characteristics when grouped together. Thus, they were labeled as cultural/natural attractions (Factor I), community characteristics/infrastructure (Factor II), and basic needs/comfort (Factor III). Table 2 shows that eigenvalues of these factors ranged

	Experimental Group (<i>n</i> =53)Mean (SD)	Control Group (<i>n</i> =39)Mean (SD)	Factor Loading	Eigen Value	% of Variance
Factor I: Cultural/Natural Attractions (72) ^b				2.46	22.40
Beautiful scenery/Natural	3.54 (.84)	3.33 (.70)	.78		
Interesting cultural	3.73 (.76)	3.48 (.72)	.67		
Interesting historical attractions	4.28 (.66)	4.07 (.62)	.73		
Good nighttime entertainment	3.22 (.80)	3.69 (.65)	.66		
Factor II: Community				2.44	22.19
Characteristics/Infrastructur	e				
(.76) ^b					
Good quality of transportation	3.83 (.75)	3.41 (.63)	.80		
Personal safety	3.49 (.95)	3.33 (.57)	.69		
Unpolluted/unspoiled environment	4.30 (.84)	4.05 (.75)	.64		
Interesting and friendly local people	3.56 (.84)	3.51 (.75)	.76		
Factor III: Basic				1.60	14.61
Needs/Comfort $(.55)^{\rm b}$					
Suitable accommodations	3.94 (.88)	3.51 (.75)	.81		
Appealing local food (cuisine)	3.13 (.73)	3.43 (.59)	.58		
Standard hygiene and cleanliness	3.83 (.72)	3.48 (.72)	.66		
					59.21%

Table 1. Factor Analysis of Cognitive Image Items^a

^a Scale:1=Strongly Disagree and 5=Strongly Agree.

^b Number in parentheses indicates Cronbach's coefficient alpha.

from 1.60 to 2.46 and most of the loadings were greater than .60, indicating a good correlation between the items and the factor on which they loaded. Cronbach's alpha coefficients were analyzed to check the internal consistency of the scale and coefficients were above the satisfactory level (above .70) in cultural/natural attractions and community characteristics/infrastructure. Only the basic needs/comforts factor showed a relatively low reliability score (.55), likely because of the smaller number of items included in the factor. Conventionally, it has been shown that as the number of items increases, so does also the alpha value; and acceptable levels of alpha value can be as low as .50 for scales consisting of a small number of items (Carmines and Zeller 1979). The three factors were used as the cognitive image variables in subsequent analyses associated with hypothesis testing.

Dimension	Experimental Group (<i>n</i> =53) Mean (SD)	Control Group (<i>n</i> =39) Mean (SD)	Total (<i>n</i> =92)	
Arousing–Sleepy Quality (.75) ^b	.70 (.79)	.66 (.79)	.68 (.79)	
Exciting–Gloomy Quality (.84) ^b	1.41 (.74)	1.51 (.92)	1.45 (.82)	
Pleasant–Unpleasant Quality (90) ^b	2.16 (.73)	1.86 (.89)	2.03 (.81)	
Relaxing–Distressing Quality (.81) ^b	1.74 (.72)	1.06 (.80)	1.45 (.82)	

Table 2. (Composite	Measures	of	Affective	Images ^a
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^a Scale: 1=Extremely Inaccurate and 8=Extremely Accurate.

^b Number in parentheses indicates Cronbach's alpha coefficient.

Affective Image. The examination of descriptive statistics revealed that both experimental and control groups rated higher on positive items and lower on negative items, indicating both groups evaluated Vienna as a relatively positive place. Affective image scores were calculated according to the instructions provided by Russel and Pratt (1980). From each dimension, scores on positively and negatively keyed items were totalled separately. The sums of positive items were then subtracted from those of negative ones. For example, in the case of the pleasant-unpleasant dimension, rating scores of five positive items (pleasant, nice, pleasing, pretty, and beautiful) were summed. Scores of five negative items (dissatisfying, displeasing, repulsive, unpleasant, and uncomfortable) were also calculated. Then, the total of positive bipolar items was subtracted from that of negatives within a same dimension. This procedure produced four bipolar dimensions (arousing-sleepy, exciting-boring, pleasant-unpleasant, and relaxingdistressing) capturing affective image of Vienna (Table 2), which were used as the four affective image variables in subsequent analyses.

Empathy. Because the control group did not receive an experimental treatment (*Before Sunrise*), the empathy scale was analyzed only for the experimental group. Principal components analysis, conducted to assess the unidimensionality of the scale, indicated that all eight items of the empathy scale loaded on a single factor. Cronbach's alpha coefficient was .87, indicating that this scale had high internal consistency among items. Therefore, it was deemed appropriate for a composite empathy score to be calculated and used as the measure of empathy in this study. The overall mean score was 3.70, indicating that the respondents showed moderate empathic involvement with the film characters (Table 3).

Familiarity. Descriptive statistics for four familiarity items are reported in Table 4. Overall, all the subjects rated low (below 2.0) here, indicating that respondents did not consider Vienna a familiar place. Standard deviations also showed small dispersion of the responses on these items. Principal components analysis suggested that all four items were loaded on one factor and a Cronbach's alpha coef-

Item	Scale	Experimental Group (<i>n</i> =53)Mean (SD)
Empathy (.87) ^b		
I tried to understand the characters in the movie by	1–5	3.71 (.98)
imagining how things look from their perspective		
I really got involved with the feelings of the	1–5	3.79 (1.0)
characters in the movie		
While watching the movie, I easily put myself in the	1–5	3.73 (1.1)
place of one of the leading characters		
While watching the movie, I felt as if the characters'	1–5	3.16 (1.2)
thoughts and feelings were my own		
While watching the movie, I imagined how I would	1–5	4.26 (.81)
feel if the events in the story were happening to me		
While watching the movie, I tried to imagine what	1–5	3.73 (1.0)
the characters were thinking		
I became very involved in what the characters were	1–5	3.79 (1.0)
experiencing throughout the story		
While watching the movie, I experienced many of	1–5	3.45(1.1)
the same feelings that the characters portrayed		
Grand Mean		3.70 (.76)

Table 3. Descriptive Statistics of Empathy Scale Items^a

^a Scale: 1=Strongly Disagree and 5=Strongly Agree.

^b Number in parentheses indicates Cronbach's alpha coefficient. The empathy was measured only to the experimental group.

ficient of .79 indicated high internal consistency of items. Thus, it was deemed reasonable to use a composite score of these items as a measure of the familiarity concept in this study.

Results: Hypotheses Testing

Hypotheses were tested using Pearson correlations and independent sample *t*-tests. Across all the hypotheses, findings were considered significant at the .05 level.

Hypothesis 1: Perceived destination images of Vienna will be significantly different between subjects exposed to the film "Before Sunrise" and not. To test the impact of the experimental treatment on place image, the differences in cognitive and affective image components between experimental and control groups were measured using *t*-tests (Table 5). All three cognitive image variables (factors) showed statistically significant differences between the experimental and control groups. In particular, the basic needs/comfort factor was negatively affected by the experimental treatment (*Before Sunrise*) while the other two were positively influenced by the movie. Affective image variables showed somewhat different results. Of the four affective image variables, only the relaxing–distressing dimension was found to be significantly different between the experimental and control groups. Those who were exposed to the movie evaluated Vienna more favorably on this dimen-

Item	Scale	Experimental Group (<i>n</i> =53) Mean (SD)	Control Group (<i>n</i> =39) Mean (SD)
Familiarity (.79) ^b			
How familiar are you with the	1–7	1.45 (.99)	1.28 (.75)
lifestyle of people in Vienna?			
How familiar are you with	1–7	1.84 (1.0)	1.89 (1.2)
cultural / historical attractions in			
Vienna?			
How familiar are you with	1–7	2.15 (1.3)	2.15 (1.6)
Landscape in Vienna?			
How familiar are you nighttime	1–7	1.66 (1.2)	1.30 (.42)
entertainment in Vienna?			
Total		1.77 (.89)	1.66 (.79)

Table 4. Descriptive Statistics of Familiarity Items^a

^a Scale: 1=Not at all Familiar and 7=Extremely Familiar.

^b Number in parentheses indicates a Cronbach's alpha coefficient.

sion compared to those not exposed to it. Thus, a total of four image variables (three cognitive and one affective) out of a possible seven showed significant differences between the two groups. Thus, Hypothesis 1 was partially supported.

Hypothesis 2: Interest in visiting Vienna will be significantly different between subjects exposed to the film and those not. Again t-tests were performed to measure the mean difference between experimental and control groups in their interest in visiting Vienna. The result shows that there was a statistically significant difference (p<.01) between the groups. Subjects who had viewed the movie expressed a higher degree of interest in visiting Vienna than those who did not. Thus, Hypothesis 2 was supported.

Table 5. Differences between Experimental and Control Groups

	df	<i>t</i> -value	
Cognitive Image:			
Cultural/Natural Attractions	90	2.60^{a}	
Community Characteristics/Infrastructure	90	2.50^{a}	
Basic Needs/Comfort	90	-4.12^{b}	
Affective Image:			
Arousing-Sleepy	90	.213	
Exciting-Boring	90	580	
Pleasant–Unpleasant	90	1.76	
Relaxing-Distressing	90	4.23 ^b	

^a *t*-value is statistically significant at the .05 level (2-tailed).

^b *t*-value is statistically significant at the .01 level (2-tailed).

Hypothesis 3: The degree of empathy will be significantly related to perceived destination images. To test this hypothesis, correlation analyses between the degree of empathic involvement with the film characters and cognitive and affective image components (total of seven variables) were conducted. The result suggests that empathic involvement with the film characters was not related to any of the cognitive variables. For the affective, two dimensions showed significant relationships with empathic involvement: arousing–sleepy (p<.01) and exciting–boring (p<.05). Thus, Hypothesis 3 was not fully supported since only two out of seven correlations were statistically significant.

Hypothesis 4. The degree of empathy will be positively related to the degree of perceived familiarity with Vienna. Again correlation analysis was undertaken in order to test this hypothesis. The result shows that the degree of empathic involvement with the film characters was not correlated to perceived familiarity with Vienna (p < .57). Based on this finding, Hypothesis 4 was rejected.

Hypothesis 5. Perceived degree of familiarity with Vienna will be significantly higher for subjects who are exposed to the film than for those who are not exposed. T-tests were run to determine the mean difference in familiarity between experimental and control groups. The result indicates there were no significant differences between the two groups in their perceived familiarity with Vienna (p < .52). Thus, Hypothesis 5 was rejected.

Consequently, hypothesis testing revealed several findings in terms of impacts of a movie on destination perceptions (Figure 1). The solid arrows indicate statistically significant relationships while the dotted ones represent relationships that were not statistically significant in this study.



Figure 1. Results of Hypothesis Testing within Conceptual Model

CONCLUSION

The primary purpose of the study was to investigate influences of a popular motion picture on viewers' perceptions of the depicted place. Key findings of the study can be summarized in three ways: the movie significantly affected some of the destination image components and interest in visiting Vienna; the level of empathic involvement with the film characters was not significantly associated with either component (cognitive or affective) of destination image or with familiarity; and the movie did not enhance the degree of familiarity with the destination portrayed in it.

Some of the findings were contrary to expectations, particularly those related to empathy. Since this is the first study to examine the influence of empathic involvement with film characters on destination image changes, it is hard to find any evidence to contradict or offer additional insight to the results. Thus, it should be concluded that empathic involvement, at least as measured in this study, is not the main cause for viewers to change their perceptions of locations depicted in films. This finding raises questions about the role of vicarious experience in shaping images of places. While this process has been previously cited as important to understanding influences of movies on images (Riley and Van Doren 1992), the efficacy of this construct remains unclear. It may be that the construct of vicarious experience is not as closely tied to empathic involvement as has been suggested in the marketing literature. Instead, more direct (rather than vicarious) participation with a place may occur through movie viewing. That is, subjects may feel that they are personally and more directly drawn into the "presence" of a place, rather than experiencing it through the eyes of another.

In terms of the movie's influence on cognitive and affective images, changes to these components seemed to be consistent with the content of the film. All three cognitive factors and one affective dimension were associated with the way Vienna was depicted. Thus, it can be argued that the specific content of the movie can significantly affect the viewers' image of a place portrayed in the film, in both positive and negative directions.

The experimental and control groups did not show any significant differences in terms of degree of familiarity with Vienna, indicating that exposure to the place through the movie did not enhance audiences' degree of familiarity with Vienna. This unexpected result can be explained in two ways. One, given that familiarity was operationalized here as an attitudinal variable measuring psychological closeness, it may be that fictional depiction of a place does not foster that psychological mindset. Additionally, the importance of a multidimensional measure of familiarity has been previously discussed. It may be that both behavioral and attitudinal components are important to capturing familiarity. Other factors, such as actual visitation and word of mouth, which are not associated with fictional depictions, may also be more influential in shaping familiarity. Two, it is possible to infer that a short exposure to a place through observing a movie might not be salient enough to enhance the perceived degree of familiarity with the place. Perhaps, this sense of a place can be enhanced through repeated exposures to that place through film and other sources over time.

The findings from this study support and expand upon previous research and have unique marketing implications. First, this study provided some empirical evidence that a popular motion picture could significantly influence destination image. This finding implicitly supports Gartner's (1993) argument that autonomous image formation agents (such as popular culture and news) can change destination images in a short time period. Second, there have been several studies that identified an increase in popularity of locations depicted in films, which suggests the potential of place specific movies to serve as tourism attractors (Riley and Van Doren 1992; Riley et al 1998; Tooke and Baker 1996). Findings from these studies appear to be limited to descriptive understandings of the functions of movies in the context of tourism and do not offer theoretical insight to why these phenomena occur. Some of the findings generated by this study, such as those related to the nature of image change, partly explain extra tourism induced by movies and suggest that a motion picture could be an effective tool to change place images and affect the audiences' interest in visiting the place.

This study, as a third point, expanded understanding of image by measuring both cognitive and affective components. With the exception of Baloglu and Brinberg (1997), most destination image literature seems to have overlooked affective dimensions, although the existence of an affective component has been acknowledged (Baloglu and McClearly 1999; Dann 1996; Gartner 1993). This study suggests that both cognitive and affective images can influence destination perceptions, indicating that researchers need to consider both components.

From a marketing standpoint, the study findings suggest that the content of a movie can be related to destination image formation, with change either positive or negative. Unlike other traditional promotion tools, destination marketers are not likely to have control about the way a place is portrayed in the motion pictures. Thus, it is important to develop or adjust their image management strategy depending on the way the place is projected. Although not investigated in this study, it is very likely that different types of movies attract different audience segments, which in turn implies that a destination marketer might be able to predict the possible tourism segment attracted by the film. Therefore, analyzing the content of the movie and identifying possible symbols portrayed in it will enable destination marketers to make appropriate plans.

It is apparent from this study that further research is needed to better comprehend relationships between movies and tourism. A variety of issues were not clarified by this study. First, the concept of empathy was not found to be an effective theoretical linkage between film viewing and perception changes of depicted places. Thus, further attention to an appropriate theoretical framework for understanding how movie viewing changes place images is needed. Second, the concept of familiarity needs further consideration. As mentioned earlier, improved measures that consider both behavioral and attitudinal aspects should be explored in future research. Third, this study did not consider the role of audiences' emotion beyond the empathy construct within the conceptual framework. It is possible to infer that either positive or negative emotional experiences, such as happiness or sadness, caused by observing a movie might affect the destination-related variables of this study. For this reason, the impacts of emotional experience, along with empathic involvement, should also be analyzed.

Fourth, this study did not take audiences' characteristics into account in analyzing the impacts of movie on destination perception changes. Baloglu and McClearly (1999) suggested that the destination images are likely to be formed as a function of both perceiver characteristics (demographics and motivations) and stimuli. Thus, future research should explore the interrelationship between audiences' characteristics and perception change through movie watching. Fifth, from the methodological perspective, a laboratory experiment was employed in this study to accomplish the proposed purposes. However, this comes with inherent weaknesses in terms of external validity of the study findings. It is not certain that what is drawn from the study can be generalized to "real world" situations. An actual movie-going situation might be very different from the experimental situation. For example, in most cases, movie viewing is done voluntarily to seek entertainment, which might affect viewers' emotions and degrees of involvement in the film. Additionally, an actual movie-going situation would likely include a more diverse audience (for example, in terms of age, occupation, and other characteristics) than that associated with the experiment reported here. Therefore, future research should include field experiments conducted in natural settings, such as commercial movie theater, to increase the external validity of the study findings. Sixth, the study did not explore the extent to which changes to images were enduring, a factor which would offer insight to the role of movies in later tourism decision-making.

Finally, this study employed only one specific type of movie to identify impacts on viewer perceptions. Future research needs to employ diverse types with different themes in order to test the extent to which perceived impacts, and variables which influence them, can vary. To this end, both qualitative research approaches (which can offer insight to topics including semiotics, individual experience, and cultural meanings associated with film-place relationships) and quantitative methods (which can help investigate efficacies of theoretical orientations) can advance understanding.

It is anticipated that the phenomenon of movie-induced tourism will continue to grow as participation in leisure pursuits by emerging global markets expands, and film and other forms of mass media are internationally distributed and viewed. Popular motion pictures may be particularly critical elements of popular culture in creating place images since they often serve to mystify places by imbuing them with myth and meaning through drama. This generates audience involvement and consumption, thus allowing meaning to be created from the representation. As demonstrated by research associated with the movie *Braveheart* (Seaton and Hay 1998), it is not the objective reality of the place (much of *Braveheart* was actually filmed in Ireland, though tourists indicated that they came to Scotland to visit places depicted in the film), but instead the meaning it represents that transforms places depicted in motion pictures to symbolically meaningful tourist attractions.

One of the significant characteristics of popular culture resides in mass consumption and sharing ideas within a given society. In this sense, the influence of popular culture in an increasingly global society is expanding exposure to, and interest in, destinations. For this reason, relationships of film, and other forms of popular culture, to tourism must be further critiqued, researched, and understood.

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