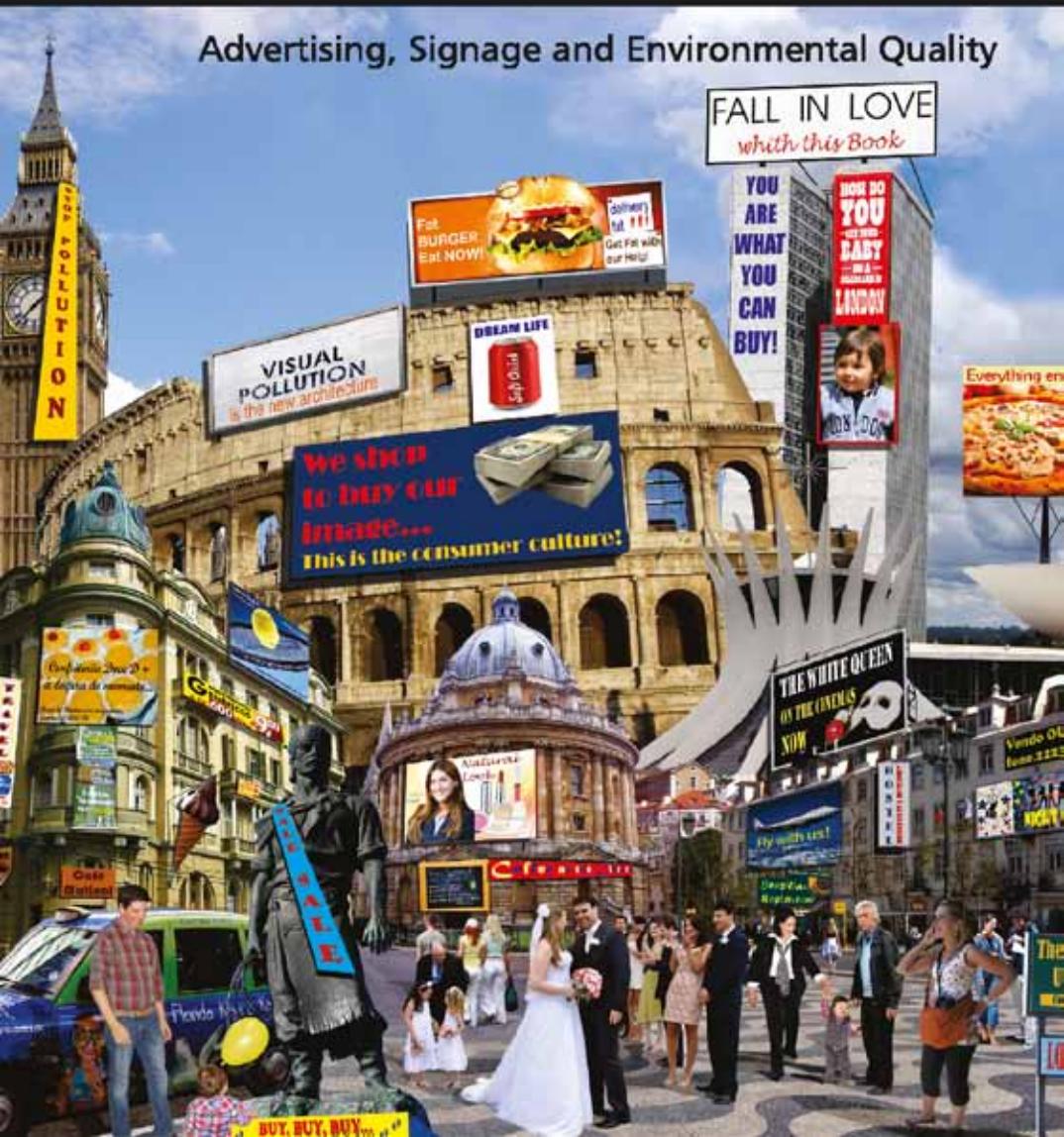


Adriana Portella

Visual Pollution

Advertising, Signage and Environmental Quality



VISUAL POLLUTION

Advertising in its new version is no longer the baroque, utopian scenario ecstatic over objects and consumption, but rather the effect of the omnipresent visibility of corporations, trademarks, PR men, social dialogue and the virtues of communication. With the disappearance of the public space, advertising invades everything (the street, the monument, the market, the stage, language). It determines architecture and the creation of super-objects such as Beauborg, Les Halles or La Villette which are literally advertising monuments (or anti-monuments)[...]. Today our only architecture is just that: huge screens upon which moving atoms, particles and molecules are refracted. The public stage, the public space have been replaced by gigantic circulation, ventilation, and ephemeral connecting spaces.

Baudrillard, J. 1987

Visual Pollution

Advertising, Signage and Environmental Quality

ADRIANA PORTELLA

Oxford Brookes University, The Joint Centre for Urban Design, UK

ASHGATE

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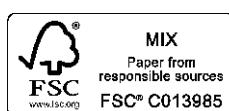
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In memory of my father, Dr. Jorge Alberto Luscke Portella

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(Source: author)

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(Source: author; Gabriela Fantinel Ferreira)

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(Source: author)

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Adriana Araujo Portella

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Preface

This book is the result of 11 years of studies related to Empirical Aesthetics regarding how users from different cultures perceive and evaluate public space. Although it has already been confirmed that user's background influences on how public space is perceived and evaluated, I always believed that general principles of formal organizations based on Gestalt Theory are the most important attributes for perception and evaluation of visual quality of streetscapes and cities as a whole. One question that inspired my sense of investigation was: Why do people from different cultures always have a similar sense of satisfaction when visiting global cities as Paris, London and Rome, for example? I have been in the academic life for 16 years now and when I ask my colleagues and students if they prefer Paris, London or Rome, for instance, most of them say that they like all these three cities. Even people who have never been to these places like them. In this way, it is assumed that user's preference and satisfaction for places and cities go beyond personal experiences and are more related to concepts of order, visual quality, complexity and contrast than we think. User's perceptions are also influenced by strategies of marketing the city and urban tourism. We can notice that when people who have never been to a place can easily say whether they like it or not. Of course, we cannot ignore that the global world where we are living now has had great influence on the process of user's perception and evaluation as in seconds we can go from London to São Paulo, for example. Tools such as "Google Street View" have just completely changed the way people see places and created a mental image of them as well as the way we do research.

The content of this book brings together the main theoretical discussions and findings of my Ph.D. thesis in Urban Design, which I developed at Oxford Brookes University in England with the assistance of Dr. Alan Reeve and Dr. Roger Simmonds. This study was a continuation of my Master's dissertation which I finished in Brazil between 2001 and 2003 when I was studying Regional and Urban Planning at the Federal University of Rio Grande do Sul. Since I was an architecture student, I have been concerned about the damage that commercial signs have been causing to the visual quality of my home city, Pelotas. Pelotas is located in the south of Brazil and its streetscape has significant influence of French and Portuguese architecture as it was brought by immigrants in the beginning of the eighteenth century. Many local actions have been taken to reduce the chaos caused by commercial signs. However, a few buildings have escaped from the deterioration process of visual quality.

As I have been committed to helping solve this problem, I have been studied how commercial signs, especially shopfronts, interfere in the visual quality of historic city centres regarding perceptions and evaluations of residents and non-

residents, people from different countries and cultures. The theoretical framework of my studies is based on principles of environmental psychology, empirical aesthetic, Gestalt Theory, order and chaos. According to my investigations, visual order is a fundamental issue so that commercial city centres are evaluated positively by users from different cultures and users' groups. In this case, the concept of order is related to different degrees of complexity which refer to the variation of physical attributes of signs and buildings in an ordered streetscape. On the other hand, when there is a high variation of physical forms but there is no order in the streetscape the result is a chaotic instead of a high complex place. A streetscape will be evaluated as negative by users if there are no relationships between the parts of its whole.

In this context, this book analyses the lack of a general approach to guide and control commercial signs in historic city centres, based on the perception and evaluation of users from different countries and cultures. The main objective here was to identify those physical characteristics of commercial signs and buildings that should be taken into account in the development of this approach. This book begins with the development of a theoretical and conceptual framework by analysing concepts related to (i) visual quality and user's perception and evaluation of the built environment, (ii) formal and symbolic factors linked to the streetscape that influence aesthetic judgments, and (iii) non-physical variables related to the operation of commercial signage controls such as consumer culture, city centre management, marketing the city and urban tourism, and review of current commercial signage approaches adopted in different urban contexts. The empirical investigation explored user's perception and evaluation of commercial signage controls in three different historic city centres: Oxford in England, and Gramado and Pelotas in Brazil. The Environment Behavioural research field, a multiple method survey design, and a multiple case study approach were adopted.

A discussion about the research methods of a more appropriate data collection to investigate and compare users' responses from different cities, countries, cultures and languages is presented. Photomontages which represent street facades views of real places were made and their research validity confirmed. Some researchers not familiar with Environmental Behaviour studies may doubt this kind of representation. However, a lot of scientific studies have already confirmed that users' responses on-site are completely compatible with users' responses based on photomontages. It is believed that studies of users' responses based on a simple analysis of frequencies cannot be considered as scientific work, it is only an opinion view of a group of users that cannot be generalized. In this case, on the stage of data analysis, this book applies statistical tests to confirm the results.

One of the main conclusions that this book shows is about a series of common patterns of perception and evaluation among individuals from different cultures, countries, cities and groups (lay people and professionals). Several physical characteristics of commercial signs and buildings interfere on people's quality of life in the same way. Thinking about a future stage of this work, the influence of strategies related to marketing the city and urban tourism could be deeply

investigated by analysing how they are changing the way people from different cultures perceive the city and if the image that users have of public space is based on physical forms or images mainly promoted by the media. We can finish this preface leaving to reflection the following question: What is the image we have from the city and what do we expect of this in the Century where every city images are shared almost in real time to millions of people through social networks, mobile phones and 3D maps?

Adriana Araujo Portella, December 2013

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Introduction

In recent years, there has been considerable interest in the problems that public spaces face because of the design of commercial signs. Studies emanating from disciplines such as architecture and planning, behaviour research, and environmental psychology have been explored the negative consequences that disordered commercial signs have on the visual quality of urban areas. At the same time, studies have been extended to how commercial signs affect people's quality of life since these media can influence user's perception of the physical environment. Polemic books as *No Logo* by Naomi Klein (2001) and *Non-places* by Auge (1995) put on the table questions that need to be answered before the contemporary city becomes a chaotic theme park, without identity and historic character. Non-physical aspects that influence the operation of commercial signage controls such as consumer culture, city centre management, marketing the city, and urban tourism are factors that are beginning to be linked with the process of urban degradation of commercial streets, squares and also entire cities.

It is often said that historic city centres are being harmed by the uncontrolled display of commercial signs. This phenomenon is evident in contemporary urban settings of different countries, and has been explored by many researchers, as the literature demonstrates (Cullen, 2000; Passini, 1992; Nasar, 1988; Ashihara, 1983). Their studies refer to this problem as visual pollution, which is an established expression commonly used to describe the degradation of the visual quality of places by signage. Initiatives applied to reduce visual pollution or maintain the historic character of city centres still not affected by visual overload have shown that the application of guidelines to control commercial signs is essential to preserve and improve the visual quality of historic places. It is argued that, in order to achieve an attractive and pleasant built environment, it is essential that commercial signs are well designed, reflecting the characteristics of buildings and areas concerned.

However, despite the fact that the problem of visual pollution caused by commercial signage is well described and familiar to many, there is a lack in the literature of any evidence which might relate the aspects of the operation of commercial signage controls to the perception and evaluation of users from different urban contexts; such evidence could allow clear conclusions to be drawn about the universality of this relationship. The literature shows that there are many theoretical concepts which suggest what people from different backgrounds prefer in terms of the aesthetic composition of buildings. The best known theory related to these concepts is the Gestalt. However, there are no theories which inform universal preferences between users from different cities and countries in terms of the aesthetic composition of commercial signs. Several different commercial signage approaches

are currently applied in distinct historic cities, but these initiatives are not based on principles derived from the perception and evaluation of users.

It is recognized that different factors can influence user cognition, such as social and cultural values, life style and professional interests, past experiences, gender, age, personality, and ethnic groups. Moreover, cross-cultural studies have shown that mental representations of public spaces may differ for people from different cultural backgrounds (Oreg and Katz-Gerro, 2006, Isaacs, 2000). However, what the study which this book draws upon demonstrates is: there are visual preferences common to the majority of people, independent of their urban context, and these common views can be useful to the development a general theory to control commercial signage in historic city centres of different countries. This idea is supported by Reekie (1975) who said three decades ago: "What is needed is an objective approach based upon design principles that meet with common agreements, and that will lead to an environment visually acceptable to the great majority". Moreover, according to Bentley and et al (1985), the built environment should be appropriated to a wide range of people and their needs. The idea of a general commercial signage approach for different places does not ignore the fact that each city has its own particularities. The outcomes of this book suggest that the role of this approach is to recommend (i) general guidelines related to the operation of commercial signage controls, and (ii) design principles of commercial signs and buildings that can create commercial streetscapes evaluated positively by different users.

This book draws on three empirical case studies to examine questions of commercial signage control management, preservation of historic heritage and user preference and satisfaction with historic city centres on an international stage. The objective of this analysis is to inform those aspects of the operation of commercial signage controls that need to be taken into account in the development of a general commercial signage approach. The empirical investigation adopted the Environment Behavioural approach, which involves theories, concepts, and methodologies related to environmental psychology, architecture, planning, and urban design. This book analyses the cases of (i) England, where a national approach to help local authorities to guide and control commercial signage in historic city centres is applied, and (ii) Brazil, where there is no national approach to control commercial signage leaving local authorities with the responsibility to develop commercial signage controls, and to decide whether these controls are necessary in historic city centres. Three historic cities are examined: Oxford, in England, where a national commercial signage approach is applied to preserve historic heritage, and Gramado and Pelotas, in Brazil. In the first Brazilian city, commercial signage controls are applied by the local authority to create a theme park, whereas in the second city commercial signage controls have never been implemented. The analysis of the case studies is set within a context of theoretical debates about commercial signage and historic heritage, factors related to the process of transformation of the appearance of city centres, importance of these places as multi-function areas, and influence of commercial signs on environmental quality.

This discussion provides evidence for further theoretical discussions in the Environment Behavioural research field. It is because the findings demonstrated that some visual preferences, related to commercial streetscapes, are based on the process of user perception (perceptual constancy) more than on the process of user cognition. This is because standard judgments related to the appearance of commercial streetscapes were found between users from different places and backgrounds. In this regard, this work begins to fill the gap in the literature of what relates the operation of commercial signage controls to the perception and evaluation of users from different urban contexts. The empirical investigation has found that there are universal perceptions among users from different cities, countries, and user groups (lay people and professionals) in relation to the aesthetic composition of commercial streetscapes. There is currently no book that deals directly with preference and satisfaction of users from different countries in relation to the appearance of commercial and historic city centres. Nasar (1988) did few studies related with visual preferences in urban signscapes; however his investigations were based on computer simulations and preferences of users located in one city. In this sense, the present book is the first work which compares responses of people from different cultures in relation to the appearance of real (not computer simulations) commercial and historic settings.

This book is addressed to a world-wide community interested in city, design, signage, historic heritage, architecture, marketing and tourism. This is also relevant to post-graduate students and academics of the fields of architecture, planning, urban design, environmental psychology, tourism, publicity and a range of professionals in public and private sectors who deal with the preservation of historic heritage. Moreover, the findings attempt to help national, regional and local authorities design and implement commercial signage controls.

Synopsis of each Chapter and Glossary of Concepts

This book is divided in two parts: the first part comprises the theoretical debated about the variables involved in the process of user perception and evaluation of commercial city centres and the factors involved in the development of commercial signage guidelines applied in historic cities; the second part presents the empirical investigation which this book draws upon showing how this study was conducted and the main results based on common views between users from different cities and countries (see Table I.1).

Table I.1 Book structure

INTRODUCTION	
PART I: THE THEORETICAL DEBATE	Chapter 1 User Perception and Cognition of the Built Environment
	Chapter 2 Consumer Culture, Marketing the City and Urban Tourism
	Chapter 3 Review of Commercial Signage Controls
	Chapter 4 Empirical Investigation - UK and Brazil
	Chapter 5 People's Quality of Life and Commercial Signage Control Management
	Chapter 6 User's Preference and Satisfaction with Historic Streetscapes
	Chapter 7 Commercial Signage and Building Design - Positive and Negative Factors
CONCLUSION: What is needed to enhance visual quality in historic and commercial city centres?	

Moreover, eight concepts are defined to avoid misunderstanding of the terminologies adopted in this book, as follow:

- Commercial signage: this term refers to shopfronts, advertisements, billboards and window displays.
- Historic buildings: buildings recognized by law as being of historic and/or cultural importance.
- Ordinary buildings: buildings which are not historic.
- Visual pollution: the degradation of the visual quality of historic city centres caused by commercial signs displayed on building facades and in public spaces.
- Street facade: an image of a block elevation of all building facades that form one street side.
- Conflict between design of commercial signs and aesthetic composition of building facades or harmed buildings: this situation is identified as when commercial signs cover partially or totally elements of building facade such as silhouette, facade details, and façade articulation.
- Urban context: this term is defined in terms of geographic localization, total population, territorial extension, demographic density, population and

immigrants, general economic activities, historic foundation and general characteristics of the streetscape of city centres.

- Manufactured character or manufactured image: the character and image of cities where aesthetic controls are applied to promote fake historic architecture and/or historical theme urban environments.

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PART I

The Theoretical Debate: Visual Quality of Public Spaces versus Commercial Signage



Figure I.1 Avenue des Champs-Élysées in Paris. The signage becomes the architecture itself as already predicted by Jean Baudrillard. (Source: author)

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Chapter 1

User's Perception and Cognition of the Built Environment

This first chapter discusses concepts related to the Environment-Behaviour approach, which explores the relationships between human perception, evaluation and behaviour and the built and natural environment. This approach is distinguished from other studies by the explicit consideration it gives to the needs and preferences of people who are destined to use a determined setting. In this regard, this chapter introduces concepts, which are applied later in this book to analyse user perception and evaluation of commercial signage controls and appearance of historic city centres. First, the concept and importance of visual quality in the built environment are discussed. Next, the attributes of legibility and imageability, the processes of perception and cognition, the concepts of user preference and user satisfaction, and the dimensions of aesthetic evaluation applied to analyse the appearance of streetscapes are presented. The use of vague and ambiguous expressions in aesthetic evaluations and the influence of user background on perception and evaluation of the built environment are also discussed.

Formal and symbolic factors that can influence aesthetic judgements are also investigated. In the discussion, formal factors are related to physical characteristics of commercial signs and buildings. The concept of complexity is also taken into account in order to identify what level of variation (high, moderate or low) of commercial signs and buildings is perceived as positive by users from different cultures. Symbolic factors are explored with particular focus on the importance given to historic buildings and places by users when they evaluate commercial streetscapes. At the end, the conclusion summarizes the preliminary principles adopted for the theoretical and conceptual framework of the empirical investigation discussed later in this book.

Visual Quality of the Built Environment

The concept of visual quality is related to the level of order among the physical elements of built space such as the features of buildings and commercial signs. As affirmed by the architect researcher Ralf Weber (1995, p.113) in his book 'On the Aesthetics of Architecture': 'the more orderly a configuration, the higher its aesthetic value'. According to Gestalt psychology principles, the high visual quality of a public place consists in the 'good form' or 'pragnanz' of the city. 'Good' in this case concerns how elements in an aesthetic composition are related to each other

such as regularity, orderliness, simplicity, symmetry and so on, which then refer to specific Gestalt laws. In this book, places where there is no aesthetic conflict between physical elements of buildings and commercial signs are recognized as having high visual quality or high order. On the other hand, low visual quality is linked to disordered places as already said by the German psychologist Rudolf Arnheim (1977) three decades ago. According to Jon Lang (1987, p.189) in his well-known book 'Creating Architectural Theory': 'a disordered environment is one where the relationship of components to each other is purely haphazard and not governed by some overall principle'.

Weber (1995) agrees with Arnheim (1977) who said that order is an indispensable aspect in all kinds of configuration (physical and mental). According to both authors, ordered compositions cause positive reactions on user perception and evaluation. Although user evaluation can be influenced by particular experiences, preferences and feelings, the perception of order is evaluated as positive by almost all people. A study developed by Jack Nasar in 1998 also suggested that ordered streetscapes are evaluated positively by people who live in different cultures environments as he compared perceptions of people who live in Japan and the United States. On the other hand, disordered public spaces are evaluated negatively because observers are exposed to a series of disconnected aesthetic elements (such as commercial signs, buildings and urban furniture) which provoke user saturation. This saturation experience means that people lose the enjoyment of variety, and their perceptions become insensitive to the succession of visual stimulus without order presented by signage and buildings.

The importance of high visual quality in public space is analysed in several studies and it has been a common sense in the literature since the second half of the 20th century (e.g. Stamps, 2000; Weber, 1995; Herzog, 1992, Nasar, 1988; Russell and Ward, 1981; Oostendorp and Berlyne, 1978; Wohlwill, 1976; Harrison and Sarre, 1975; Hershberger and Cass, 1974; Lowenthal and Riel, 1972; Canter, 1969). The literature supports the argument that the visual quality of public spaces influences human behaviour, and it also identifies aesthetic compositions of buildings evaluated positively and negatively by users. The importance of high visual quality is also emphasized because it promotes safe, better behaviour from users and can create interaction between people and local authorities in order to get a better sense of community. Lang (2005) says that the visual quality of open spaces is essential to experiencing cities and the perceptions of their quality; the high visual quality of places built by street morphology, squares, parks and buildings that face public areas forms the international images of cities such as London, Paris and Singapore. In addition, the Danish city planner Jan Gehl in his famous book 'Life Between Buildings', first published in English in 1987, argues that the extent and character of outdoor life can be influenced by physical planning. He affirms that there is a relationship between outdoor visual quality and outdoor activity. In this way, the visual quality of commercial city centres may influence user evaluation of the functions of these places (such as places of leisure, work or for passing through). It is believed that the visual quality may affect how

people use the city centres, how long individual activities last, and which activity types may develop.

Urban design principles can help to increase the visual quality of urban areas. Harley Sherlock in his work 'Cities are Good for Us' (1991) says that city centres need to have 'decent environments', without which people and their activities will eventually melt away. According to him, the expression 'decent environment' does not mean simply pleasant buildings. This term has to mean that users feel pleased and interested with the appearance of streetscapes. Sherlock demonstrates that people like shopping in ordered areas, and treatment of public spaces helps to determine pleasurable and interesting shopping experiences. A report undertaken by 'Building Design Partnership' in UK, called 'Urban Design for Retail Environments' and published in 2002, discussed how retail-led regeneration (a mechanism to revitalise communities by providing jobs, promoting economic growth and creating attractive places to draw people into an area) can deliver sustainable urban renewal. This publication supports that consumers prefer commercial city centres with qualities that make them stand out from other city centres in terms of the level of order. In the same way, shopping in ordered retail environments can improve user mood according to a study published in the 'Journal of Retailing' (Mano, 1999).

In light of this context, the empirical study presented in the second part of this book analyses the level of order in historic city centres located in different urban contexts, and explores user perception and evaluation in terms of the appearance of these places. Following the criterion applied by Portella's earlier study (2003), the level of order of commercial street facades is defined by the percentage of a street facade related to buildings harmed by commercial signs. Harmed buildings are considered to be the ones where commercial signs cover and/or damage elements related to facade silhouette, facade details, and/or facade articulation.

Legibility and Imageability

The concepts of legibility and imageability concern an exploration of how people use and visualize the built and natural environment. They were firstly investigated by Kevin Lynch (1960), who provided a theoretical framework for studying cognitive maps, urban form and the spatial relationships of three American cities (Los Angeles, Boston and Jersey City). His study reveals what elements in the built structure of those cities were important in the popular perception.

Legibility can be related to the term 'wayfinding', very well studied by Paul Arthur and Romedi Passini in their book 'Wayfinding: People, Signs, and Architecture' (1992). Wayfinding can be understood in the architectural context as the user experience of orientation and choosing a path within a place, with regard to a set of architectural and design elements that may influence orientation. In other words, this term concerns the user's capacity to form cognitive maps and involves two abilities – cognitive and behavioural – applied to get to a destination. In this case, legibility embraces character and sense of place with clarity and helps

wayfinding (Butina and Bentley, 2007; *Urban Design for Retail Environments*, 2002). In this regard, legibility is related to the ease with which people understand the layout of places. For example, to understand the layout of a city centre, people create a mental map. This representation includes points of reference (such as buildings, signs, trees and so on) which stand out first in people's minds when the streetscape is observed. These references may help people navigate through city centres, and, as defined by Lynch (1960), they can be classified as networks of paths, edges, districts, nodes and landmarks. On the other hand, imageability is the quality in a physical object which gives it a high probability of evoking a strong image in any given observer. Physical characteristics of public spaces, such as shapes of buildings and colours, are elements that compose mental images of the built environment, and help people remember a place as unique (Lynch, 1960). As described by Nasar (1998), a highly imageable city would be well formed, contain very distinct parts, and be instantly recognizable by people.

Passini, in his first book 'Wayfinding in Architecture' (1984), supports that post Kevin Lynch studies have confirmed that the importance of legibility and imageability in public spaces is valid in other cities outside the United States. In many cases, there are minor differences in the relative importance of different elements over different cultures. Consequently, Lynch's findings (1960) have been implemented in city planning operations in several places in recent years. As a result, people may be benefiting from the use of more legible and imaginable city elements and clearer forms. Strategies applied by local authorities to improve legibility and imageability of public areas can be seen, for example, in Bristol and Bath, in England. One of the aims of the City Design Group in Bristol is to create a comprehensible image of the city by means of signs, routes, street furniture design, public art, publicity and marketing; this group of action is named 'Legible City' (Kelly and Kelly, 2003). Similarly, practices in development controls in Bath emphasize the importance of legibility in terms of landmarks and the relationship to existing and past urban form (Bath and North East Somerset City Council, 2007) (see Figure 1.1).

Legibility and imageability increase user perception of personal safety and make people become more familiar with their surroundings. Shop owners might desire legible and imaginable commercial city centres because shoppers may be able to find their stores more easily. Mental references make it easier for people to find their way around; anchor stores often act as references within the townscape, as do shopfronts and window displays. Commercial city centres which are too uniform do not help to build the legibility and imageability of places. In terms of commercial signage controls adopted in historic sites, in some places these can fail to provide sufficient variety to attract the public as a destination. According to the report 'Urban Design for Retail Environments' (2002), this can happen because of lack of diversity with particular focus on commercial signs. For these reasons, good legibility and imageability are about creating a memorable experience that involves the variety of commercial signs and buildings in an ordered relationship together.



Figure 1.1 The city centre of Bath, in England, has improved its visual quality in terms of landmarks and its relationship to existing and past urban form. (Source: author)

The conceptual framework of the empirical investigation presented later in this book assumes that: (i) legibility and imageability can create or reinforce the character of commercial city centres, (ii) order creates legible and imaginable city centres, and (iii) legible and imaginable city centres help people to orientate themselves better spatially, to navigate through the centre and to find their way, and to experience a sense of place. This framework recognizes that the more legible and imaginable commercial city centres are, the more successful they are likely to be in attracting people. The concepts of legibility and imageability are applied here to analyse the mental image that people have of commercial city centres with respect to the following: (i) how users recognize historic city centres (as historic, commercial, tourist or cosmopolitan centres), (ii) whether commercial signs are identified as points of reference, and (iii) whether these media are evaluated as positive or negative elements of city centre image.

The Process of User's Perception and Cognition

The process of user evaluation of the visual quality of public spaces involves two principles: perception and cognition. The first one is related to the process by which users get visual information of places through stimuli. In city centres, these stimuli are physical elements of public spaces, such as commercial signs, shapes, colours of buildings, street furniture and so on. The latter principle does not need to be related directly to visual stimuli linked to physical characteristics of places. The cognition process involves symbolic meanings associated with places, and can be influenced by user urban context, values, culture and individual experiences. This last definition agrees with what Nicholas Meader, David Uzzell and Birgitta Gatersleben say in their paper 'Cultural Theory and Quality of Life' (2006, p.61): 'people do not perceive the environment through clear eyes, but through perceptual lenses coloured by their world view'.

An approach suggested by Lang (1987) indicates that the process of perception and cognition involves three interlinked factors: a multi-sensorial perception, symbolic meanings, and the relationship between these symbolic meanings and the physical characteristics of the built environment. In this approach, user perception involves more than a mere intellectual association related to an observed object; this is also linked with the cognitive process from the first stage. Consequently, the result of the processes of perception and cognition constitutes the mental representation of the public space that is what people evaluate as positive or negative when the streetscape is analysed (see Figure 1.2). In this regard, this mental representation is the focus of the empirical investigation presented in this book as this study analyses how commercial historic city centres are perceived and evaluated by people from different urban contexts. The following issues are taken into account in the theoretical framework of this analysis: (i) perceptions of users from different backgrounds can be similar according to the phenomenon of perceptual constancy already identified by David Canter more than three decades

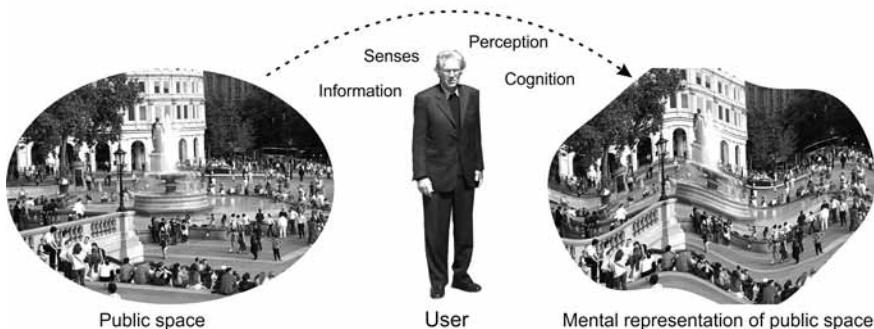


Figure 1.2 The final result of the process of user perception and cognition of a public space is the mental representation of this space.
 (Source: author)

ago (1974), and (ii) evaluations of users from different backgrounds can vary due to their interpretations of the built environment, which might be influenced by their personal experiences.

Preference and Satisfaction

The concepts of preference and satisfaction are applied to evaluate the visual quality of the built and natural environment. Preference judgement concerns something that will be experienced by users, and is always related to users' choice for one or more objects compared to others. On the other hand, satisfaction involves something that has been experienced by users, and does not need to involve comparison among things. According to Avery Guest and Barrett Lee (1983, p.234), satisfaction is 'the utilitarian value [of a place] to meet certain basic needs', which can range from social activities to physical characteristics. Preference and satisfaction are involved in aesthetic judgements, which may correspond to scales of evaluation such as beautiful–ugly, pleasant–unpleasant, likeable–dislikeable, and good–bad. Arthur Stamps, in his notorious book 'Psychology and the Aesthetics of the Built Environment' (2000), establishes that this kind of judgements allows comparison between different user groups in terms of evaluation of streetscapes, and between physical characteristics of the public space and user evaluation of its visual quality.

Analysis of user preference and satisfaction in terms of the appearance of commercial streetscapes can help in the identification of the physical elements of buildings and commercial signs perceived and evaluated negatively and positively by people from different urban contexts. To identify these elements, the empirical investigation presented in this book analyses the physical characteristics of buildings and commercial signs indicated as positive and negative by users from different urban contexts, and the intensity of influence of these characteristics on user preference and satisfaction. For instance, if a positive correlation is found

between user satisfaction with a city centre and the importance attributed to a specific physical characteristic of this place, it indicates that this physical aspect is influencing user evaluation.

Dimensions of Aesthetic Evaluation

According to the study carried out by James Russel, published in Nasar's book (1988), there are two different aesthetic dimensions involved in the evaluation of the appearance of built and natural environment: non-affective and affective. Non-affective dimensions are related with the physical features of the streetscape, which can be evaluated, for example, as order or disorder and colourful or colourless, while affective dimensions occur when users evaluate places through qualities such as pleasantness or stressfulness. To classify a place as pleasant or interesting means to attribute to that place affective qualities, which concern a capacity to alter mood. In this regard, these qualities are linked to emotion and cognition; they relate to emotion if they concern affective feelings, and they evoke cognition if they involve user interpretation of a place. Environment Behavioural researchers have analysed the correlations found between non-affective and affective dimensions in order to explore how to improve the appearance of public areas. According to the works of Arthur Stamps (2000), Jack Nasar (1988), Lawrence Ward and James Russell (1981), David Lowenthal and Marquita Riel (1972), and David Canter (1969), 'pleasant' and 'interest' are the most important affective dimensions applied to evaluate the visual quality of public spaces. Russell (Nasar, 1988, p.124) says that: 'an environment is initially and automatically perceived in terms of pleasant versus unpleasant, and arousing versus without arousing. Phenomenologically, these dimensions combine in a unitary perception. The environment seems, say, pleasant and arousing.' In this way, the opposite of pleasure is displeasure and not indifference, while the opposite of interest is not lack of interest, but some type of lethargy (bored).

Nasar (1988) emphasizes another two aesthetic dimensions - 'excitement' and 'relaxation or calmness' - which are linked with the dimensions of 'pleasant' and 'interest'. A place perceived as exciting, for instance, is recognized as more pleasant and interesting than a place understood as distressing, while a place perceived as relaxing is evaluated as more pleasant and less interesting than a place recognized as gloomy. A spatial representation of the aesthetic evaluation dimensions applied to evaluate the visual quality of public spaces is put forward by Oliver (2002), Stamps (2000) and Russell (Nasar, 1988) (see Figure 1.3).

Pleasant and Interest Dimensions

The 'pleasant' dimension, according to the German philosopher Immanuel Kant (1790 quoted in Stamps, 2000), concerns attitude scales with positive, negative and neutral levels. Two scales can be related to this dimension, and the choice for one or another should be based on the purpose of each survey: 'pleasant/unpleasant'

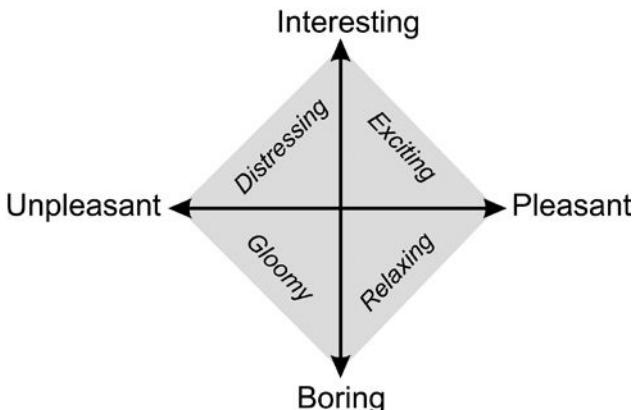


Figure 1.3 Graphic showing the aesthetic evaluation dimensions applied to evaluate the built environment. (Source: adapted by the author from Stamps, 2000, p.79)

and 'beautiful/ugly'. As one of the objectives of the empirical investigation (Part II, Chapter 4) is to explore user perception of beauty, the second scale is adopted. A semantic scale of five points from beautiful to ugly is applied in order to allow respondents to choose the point that expresses their views best. To analyse the data it is taking into account that what people find beautiful may depend on the sorts of scenes they typically encounter in their everyday life.

In an Environment-Behaviour approach, the 'interest' dimension concerns the information that users obtain through observation of the built and natural environment. In this regard, as found by Nasar (1988) and Weber (1995), areas evaluated as simple or obvious are characterized as boring by the majority of people. A famous investigation by Heron, Doane and Scott (1954), published more than half decade ago, already said that people's general feelings of wellbeing require a minimum level of visual stimulus; they demonstrated that users placed in a low-stimulus environment experienced feelings of anxiety after a short period of time. In this context, the 'interest' dimension is linked to the concept of complexity, which is discussed later. The analysis of this dimension adopts attitude scales with positive, negative and neutral levels. A five level scale from interesting to boring has been adopted here (Part II, Chapter 4) to explore user interest for the appearance of commercial streetscapes.

In terms of the dimensions of 'pleasant' and 'interest', two approaches of investigation proposed by Stamps (2000) should be considered: the first one suggests that aesthetic judgements can vary between distinct user groups, and it is a subjective parameter, while the second one suggests that aesthetic judgements are linked to the physical characteristics of public spaces, and it is an objective parameter. Both these approaches complement each other and cannot be taken as an isolated analysis.

Subjectivity and Objectivity in Aesthetic Evaluation

Studies related to user aesthetic evaluations and traditional design principles of public spaces have identified two common problems: vagueness and ambiguity of terms in user evaluation of places and some design principles guidelines. In general, people tend to describe streetscapes through vague terms, which express their impressions of these places and not the physical features that cause these impressions.

In some design guidelines applied in American cities, for example, the following regulations are recommended by local authorities: 'building components, such as windows, doors, eaves and parapets, should have *good proportions* and relationship to one another'; '*harmony* in textures, lines and masses should be encouraged'; and 'new buildings should *resemble* existing ones' (Stamps, 2000, p.10). Terminologies such as 'good proportion', 'harmony' and 'resemble' are subject to individual interpretation. Those expressions make it difficult to implement these recommendations because they do not identify in objective terms the physical characteristics of buildings that may decrease user satisfaction with the streetscape. The interpretation of commercial signage controls, for example, can become a subjective matter determined by each city council officer.

To study user evaluation of historic city centres, the empirical investigation (Part II, Chapter 4) takes into account how people feel in terms of the appearance of these places (subjective evaluation) and which physical characteristics of commercial signs and buildings influence these feelings (objective evaluation). Aesthetic judgements are based in feelings, such as pleasant and interest, linked to physical characteristics of the built environment, such as commercial signs and buildings. These judgements are explored through subjective terms such as 'beauty' and 'interest', which are related to semantic differential scales. At the same time, an objective evaluation is adopted; users are asked to indicate whether the appearance of buildings and commercial signs influences their evaluations of historic city centres. This objective evaluation also analyses the physical characteristics of commercial signs and buildings identified as positive or negative by users. Poetic language and common usage may blur the distinction between subjective and objective appraisals, mainly in answers given in people's own words (open questions). In this regard, the main challenge of any behaviour researcher is to analyse user answers and interpret data in relation to formal features of the case study.

User's Background and Evaluation of the Built Environment

As supported by Jon Lang (1987), different people pay attention to different elements and patterns in the environment. User evaluation of public areas is a 'multicoded' process: different people or user groups may have distinct interpretations and appraisals of the appearance of the same place. This may be the result of a multiplicity of meanings from a mix of different user experiences.

These experiences can sometimes be contradictory or congruent when taken into account people from different cultures and countries (Goss, 1988; Lynch, 1960).

Different factors can influence user cognition, such as social and cultural values, life style and professional interests, past experiences, social situation, gender, age, personality, family relationship, friends' viewpoints, and ethnic groups. Cross-cultural studies (such as Oreg and Katz-Gerro, 2006; Isaacs, 2000; Lang, 1987) have already shown that mental representations of public spaces may differ for people from different cultural backgrounds. As supported by David Uzzel and Gabriel Moser (2006, p.3), human needs can be distinct in different countries as 'these are societally constructed and culturally bound'. These differences may happen because different societies tend to emphasize different goals. An affective user evaluation of a place may be related to specific circumstances in which it is made, including surrounding areas and previously experienced places. Rather than being fixed, users' standards of judgement can adjust to the range and distribution of available experiences. For instance, people from rural areas may judge cities as noisier and more polluted than people from urban areas.

Taking into account studies related to aesthetic judgements of building facades and streetscapes, researchers (such as Hubbard, 1994; Neary, Symes and Brown, 1994; Garling and Evans, 1991; Devlin and Nasar, 1989; Nasar and Hong, 1999; Groat, 1982; Lee, 1982) have identified differences between responses of two user groups: professionals (architects, landscape architects, planners, urban designers and civil engineers) and lay people (users of other professional fields). These differences occur because professional interests and background qualifications (first degree, opportunity of jobs and so on) can influence the importance attributed by users to a set of aesthetic compositions.

On the other hand, similarities among users from the same group are very common. Generally members of a group have similar perception and cognition about the appearance of public spaces. This phenomenon is defined as 'common sense' or 'perceptual constancy'. Although each user has his or her own mental image of a place, Lynch's (1960) and Stamps' (2000) studies indicated that common senses among people of one group, and, sometimes, of distinct groups, is not exceptional, and can embrace people from different countries and cultures. A Jack Nasar's study (1988) investigated user satisfaction with nine commercial street simulations, which vary in terms of level of complexity and contrast. He compared the responses of different user groups: shoppers and museum visitors, males and females, young adults and older adults, and shoppers and merchants. The findings identified commonalities in responses between each pair of these groups; only six differences were found, and they were in intensity rather than in direction of response.

According to a study developed with residents in a Brazilian historic city (Portella, 2003), similarities were found among aesthetic judgements of four user groups (architects, planners, advertisers and residents) in relation to the appearance of commercial streetscapes. The majority of users from these groups agreed that, because of the disorder caused by commercial signs, the commercial streets

analysed were not pleasant. In contrast, shop owners had different views, which might be influenced by their commercial interests and opinion about commercial signage controls. They evaluated positively the appearance of commercial streets which have disordered signage. The majority of them suggested that commercial signage controls are not necessary to improve the visual quality of commercial streets, and they also believed that the adoption of this kind of regulation might decrease their profits. This view is not supported by the literature (Minami, 2001; Klein, 2000; Scenic America, 2000; Nasar and Hong, 1999). 'Scenic America', a national non-profit organization in the USA dedicated to preserving and enhancing the visual character of America's communities and countryside, identifies many cities where guidelines to control commercial signs have been adopted and the economic and social vitality has been increased.

In this context, historic city centres should be places whose appearance is satisfactory for users from different urban contexts. This is because the visual quality of the built environment can influence people's quality of life, and therefore their behaviour. As these areas are usually visited by several kinds of people, and often concentrate on entertainment and tourist activities, they should provide a high visual quality, which is appreciated by users from different cultures and urban contexts. For these reasons, the second part of this book explores whether there are differences or similarities among aesthetic judgements of users located in different urban contexts. The following general assumption is investigated: 'while some visual preferences in the built environment may be influenced by the users' urban contexts, others (universals) may be common to the majority of people from different countries and may be useful to define general principles that guide preferences and satisfactions'.

Specifically, in Part II of this book, perception and evaluation of five user groups are investigated. Views of professionals and lay people are compared since studies have suggested differences between their aesthetic judgements. People involved in design and/or study of buildings and public spaces (such as architects, landscape architects, planners, urban designers and civil engineers) form the professional group, while people from other professional backgrounds constitute the lay group. People who live in three different historic cities compose the other three user groups. The appearance of historic city centres is analysed through the responses of residents. This choice was based on the study of Malcolm Miles, Tim Hall and Iain Borden, 'The City Cultures Reader' published in 2000, which indicates that the deepest and the most authentic understanding and knowledge of a city is shown, in general, by its residents, and the city design needs to take the viewpoint of this user group. On the other hand, the appearance of commercial streetscapes is explored through the responses of residents and non-residents as well. User urban contexts and resident familiarity with the streetscape might influence people's responses. Therefore, this book explores whether residents prefer the appearance of streetscapes from their city rather than the appearance of streetscapes from other places.

Maria Elaine Kohlsdorf (1996), a Brazilian behaviour researcher, identifies four stages of cognitive human development. She argues that the total development of users' cognitive skills, which influence aesthetic evaluations, develops fully when individuals reach 11 years old. As this book is not focused on children's and teenagers' evaluations of public areas, the age groups proposed by Thiel (1997) is adopted to delimit the minimum age considered for the selection of participants in the empirical investigation (more than 65 years – Senior; 30 to 65 years – Adults; 18 to 29 years – Young adults). People who are less than 18 years old have not been selected to participate in this study.

Which Factors do Influence Aesthetic Judgements?

Formal and symbolic factors are involved in aesthetic judgements as the final image that users have of public places results from the process of perception (formal factors) and cognition (symbolic factors). In this sense, the character of city centres can be built by physical characteristics of building facades and commercial signs, and symbolic meanings attributed to these places. For example, the character of Times Square in New York and Las Vegas in the United States is formed by physical and non-physical elements of the urban space related to shopfronts, advertisements, buildings, landscape and so on. According to Andrew Kelly and Melanie Kelly (2003, p.16), New York can be described as: 'it is the quiet and the noise; the street signs and the street art; the organized trip and the unexpected discovery; the skyscrapers and the green space' (Figure 1.4).

Taking an architectural approach, formal factors refer to the physical characteristics of elements that compose the streetscape; they concern appreciation of shapes, rhythms, complexities and sequences of the visual world, although they can also be extended to a sonic, olfactory and haptic dimension. As defended by Jon Lang (2005) and Raymond Curran (1983), the perceived quality of a city is very much dependent on the visual quality of its streets, which depends on formal factors such as lengths of blocks, cross sections, widths of roadbeds and sidewalks, building setbacks and heights, frequencies of entrances to buildings, presence or absence of shop windows and shopfronts, and so on.

Symbolic factors are related to the cognition process, and involve connotative meanings that users associate with places. These meanings are constituted by different, but overlapping, images and interpretations, which can vary among individuals. As supported by Lily Kong (1995), Professor of the National University of Singapore, people are active participants in the process of making places and meanings attributed to public areas. In this book, the influence of symbolic factors on user evaluation of historic city centres is taken into account mainly in regard to the importance of historic meanings attributed to buildings.



Figure 1.4 Times Square in New York, USA. The commercial signage built the character of the place. (Source: Andreia Portella)

Order and Disorder

When taken into consideration physical characteristics of commercial signs, **two main issues** can be seen to provoke disorder: (i) conflict between design of commercial signs and aesthetic composition of building facades, and (ii) visual overload provoked by excessive numbers of commercial signs, plus high variation of their physical characteristics such as size, proportion, colour, material and so on. According to Weber (1995), too much perceptual information can overtax the user capacity for information processing.

In relation to the **first issue** mentioned above, commercial signage is in conflict with building facades when these media cover features related to building silhouette, facade details and facade articulation. When this conflict happens, buildings are perceived by users as harmed by commercial signage. In this regard, taking a previous study related to commercial streetscapes (Portella, 2003), buildings harmed by commercial signs can be classified into three levels: level 1 – facade is fragmented by commercial signs, and/or colours and these media cover totally elements of building silhouettes, facade details, and/or facade articulation; level 2 – facade is not fragmented by commercial signs and/or colours, but these media cover partially elements of building silhouette, facade details and/or facade articulation; and level 3 – facade is not fragmented by commercial signs and/

or colours, these media cover partially elements of building silhouette, facade details, and/or facade articulation but it is still possible to identify the aesthetic composition of the building facade as a whole. Moreover, there is a conflict between the visual character of places and commercial signs when these media are displayed in contemporary buildings harming the historic surrounding areas.

Focusing on the **second issue**, studies have identified that high variation of the following commercial signage features can affect the visual quality of city centres: proportion (vertical or horizontal); location (on the base, body or coronation of facades); shape; direction (vertical, horizontal or diagonal to facades); lettering size; lettering style; colour; chromatic contrast between letters and sign background; and segregation between figure and sign backgrounds by proportion (Nasar and Hong, 1999, Passini, 1984, Moles, 1987). Too high variation of these characteristics can create visual overload and, consequently, disordered streetscapes.

When a commercial sign is isolated, it can be perceived and evaluated as pleasant by users. However, when shopfronts and window displays are seen as a group covering large areas of buildings facades, people may evaluate these media as negative components of the streetscape. According to Abraham Moles, one of the first researchers to establish and analyze links between aesthetics and information theory, in his book '*L'Affiche dans la Société Urbaine*' (1987), there is a limit to the amount of visual stimuli that can be perceived adequately by users in one single vision. When this limit is exceeded, users simply avoid looking at signage. An early study developed by James Adams, '*Posters Look to the Future*' (1965), for the British Poster Association suggested that controls related to concentration of commercial signs should take into account that each street has its own particular characteristics. To avoid visual overload, his study recommended different levels of concentration of commercial signs for zones of transport (train stations, bus stations and parking), commercial activity and business (city centre), leisure (parks, squares and meadows), sports (stadiums), industries and periphery. In light of this issue, Yoshinobu Ashinara (1983), one of Japan's most celebrated architects, developed a cross-cultural study on how people actually see and feel urban spaces. His work spans East and West, ranges from traditional villages of Japan; the Italian Apulia, and the Aegean to New York, Chandigarh, and Brasilia. He defines a method to compare the concentration of commercial signs in street facades with different widths (see Table 1.1). Here, the empirical investigation (Part II, Chapter 4) takes into account (i) Ashinara's method, (ii) the number of commercial signs and buildings harmed by these media, and (iii) the percentage of street facade harmed by signage to identify the level of commercial signage concentration in different street facades. The level of commercial signage concentration in different street facades is compared to user evaluation of the appearance of these places.

The physical characteristics of buildings can also give rise to a sense of disorder in public places. For example, too much variation of building silhouettes, facade details, and facade articulation can increase user perception of visual overload in commercial streetscapes (Portella, 2003, Stamps, 2000; Nasar, 1988).

Table 1.1 Ashinara's method to calculate concentration of commercial signs

CALCULATION	EQUATION
How many square metres of commercial signs occur in each linear street metre.	$A/L = \text{metres}^2$; A is total area of commercial signage in a street facade (m^2); L is length of the street facade (m).

Source: Ashinara, 1983, p.78.

Another common situation that increases disorder in commercial city centres is the fragmentation of building facades by colour and commercial signs. This usually happens when different shops are placed in one building and each shop owner paints and displays signs on 'his/her piece of facade' without taking into account the building as a whole. The fragmentation of building facades contributes to the creation of public spaces perceived and evaluated as unpleasant by users in many city centre (Portella, 2003, 2007) (see Plate 1).

Even though user perception and evaluation of public spaces may be influenced by user background, user perception and evaluation of order is the result of an environment in which parts form the whole in such a way that redundancy, self-contradiction, and conflict are avoided. According to Ralf Weber (1995, p.110), 'perceptual order is a consequence of physiological processes that are based on innate biological principles, each individual's sense of cognitive order will, to some degree, be intersubjective'. The segregation and unification of visual stimuli from public spaces, which result in the perception of order, are determined by the principles of Gestalt Theory related to the psychological organization of visual compositions. These principles explain why a determined place is perceived as orderly, pleasant and interesting by users from different backgrounds despite the complexity of stimulation this place presents. These principles indicate how human beings tend to organize their perceptions so as to give preference to more regular configurations (Weber, 1995). One of the most sustained analyses of the content of architecture based on the Gestalt theory of perception was conducted by Rudolf Arnheim three decades ago. The approach adopted in his work 'Dynamic of Architectural Form' can be summarized by his following words: 'Shapes can be analysed in detail by describing their forms in terms of geometry, size, quantity and location, also there are visual forces which expand and contract, push and pull, rise and fall, advance and recede – which determine meaning and expression in art' (Arnheim, 1977, p.10).

According to Weber (1995) and Lang (1987), the principle of 'good Gestalt' or 'law of pragnanz' is defined as a tendency of users to take on as much regularity as possible, and this is focused on pattern perception. Seven Gestalt laws form the factors that influence user perception of form: proximity, similarity, closure, good continuance, closeness, area, and symmetry. The principle of complexity, related to the Gestalt laws, is the one that most influence user perception and evaluation

of the built environment. The relevance of complexity has been highlighted by early studies related to the built environment. George David Birkhoff, one of the most important leaders in American mathematics in his generation, in his later years published a curious work, 'Aesthetic Measure' (1933), which proposed a mathematical theory of aesthetics. While writing this book, he spent a year studying the art, music and poetry of various cultures around the world. His study proved that aesthetic quality depends on two mainly factors, order and complexity.

An argument defended by the literature is that city centres and commercial street facades are perceived as ordered when physical characteristics of commercial signs and buildings are structured according to some overall principle based on Gestalt Theory (Weber, 1995, Lang, 1987). Although all laws of Gestalt and principles related to the visual composition of forms influence user evaluation of public spaces, the empirical investigation here (Part II, Chapter 4) is focused on the analysis of complexity in commercial streetscapes. This investigation calculates the level of complexity of a set of streets and compares these results with user evaluation of the appearance of these places. The method developed by Portella's early study (2003) is adopted to calculate complexity in commercial streetscapes.

Complexity in Commercial Streetscapes: Good or Bad?

Complexity refers to a variety of elements and relationships in an aesthetic configuration, which is structured according to some overall principle based on Gestalt Theory. This concept is related to the level of order of elements that form an aesthetic composition; places where order does not exist are perceived and evaluated as chaotic and irregular, and not as complex. Order is a prerequisite for complexity; if a street facade has a high variation of physical elements but its aesthetic configuration is not governed by an overall principle, this is just a chaotic street with high variation. Nikos Salingaros, a mathematician and polymath known for his work on urban theory, architectural theory, complexity theory, and design philosophy, in his paper 'Complexity and Urban Coherence' (2000, pp.292–293) argues that: 'In a general complex system (...) certain rules of assembly are followed so that the parts cooperate and the whole functions well'. Most commercial streetscapes lie between disorder and order in which the ones in this last group can reflect different levels of complexity. In this regard, complex urban scenes are characterized by an ordered aesthetic composition formed by many visual points of attention and different aesthetic relationships between them. Here, the concept of complexity in the empirical investigation (Part II, Chapter 4) is related to the variation of physical characteristics of commercial signs and buildings in ordered streetscapes.

There is agreement in the literature that complexity is a necessary condition for aesthetic satisfaction. Robert Venturi, with his well-known book 'Complexity and Contradiction in Architecture' (1977), and Daniel Berlyne, with his 'Conflict, Arousal and Curiosity' (1960), were the first researchers to explore

the principle of complexity in urban streetscapes. Venturi confronted ideas related to modernist architecture which promoted places with low complexity, while Berlyne addressed the same propositions as Venturi, but in an approach which attempted to identify variables that may result in places being perceived positively. At the same period, Rachel Kaplan's work (1976) identified negative implications of environments perceived as too complex or too monotonous on user behaviour, such as difficult wayfinding due to too high or too low visual stimulations and lack of interest. Other studies also indicate that complex streetscapes are evaluated more positively than simple streetscapes because they provide more information (Elshehawy, 1997, Weber, 1995, Nasar, 1988, Lang, 1987). At the same time, studies show that user preferences are associated with moderate levels of complexity; the extremes – low and high complexities – are not evaluated positively by observers, and people who live in different places can have different levels of tolerance to the variation of physical characteristics of streetscapes (Portella, 2003, 2007, Nasar and Hong, 1999; Nasar, 1998).

Weber (1995) and Lang (1987) show that, according to user perception and evaluation, there is a relationship between the affective dimensions of 'pleasure' and 'interest' with complexity. In terms of the dimension of 'pleasure', this relationship is directly proportional until an optimum is reached; when this limit is exceeded, the relationship becomes inversely proportional. These researchers argue that there have been several attempts to define this optimum level, but the number of factors that influence user perception and evaluation of the physical environment is so high that no clear definition can be made. On the other hand, in terms of the dimension of 'interest', the relationship with complexity is always directly proportional (see Figure 1.5).

Physical Characteristics of Commercial Signs that increase Complexity

There is a significant relationship between user perception and evaluation of complexity and variation of commercial signs. Studies already identified that user satisfaction with commercial streets can increase through reduction of variation of some physical characteristics of commercial signs (Portella, 2007, 2003, Nasar and Hong, 1999, Scenic America, 1999, Ashihara, 1983).

The investigation carried out by Nasar and Hong, 'Visual Preferences in Urban Signscapes' (1999), for example, indicate that moderate variation of commercial signs is evaluated positively by users. According to this study, this level of variation can be obtained when: (i) a limited set of rectangular proportions of signs are allowed, (ii) letters mounted directly on the building are prohibited, (iii) colours are allowed to vary within limits specified in a colour chart developed for each place, and (vi) the number of syllables and symbols per shopfront are reduced. It was found that limitations only on height and size of signs are not enough. As stated by these authors and guidelines applied in some European and American city centres (Scenic America, 2000, 1993, Duerkesen and Goebel, 1999), variation of the following physical characteristics of commercial signs can influence user

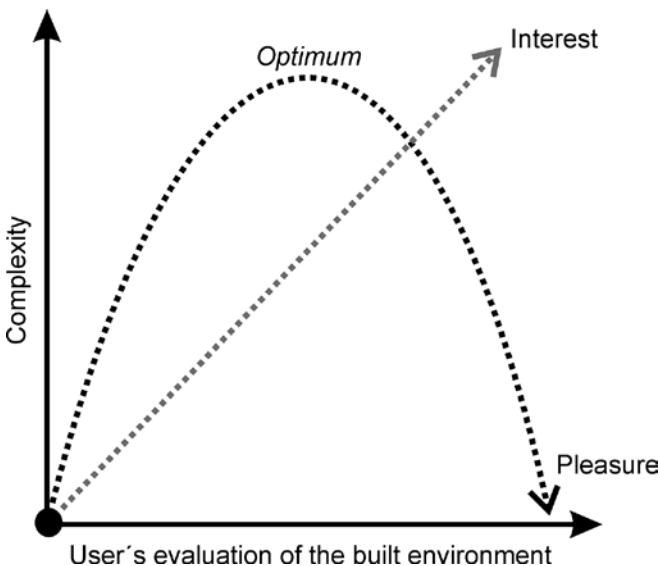


Figure 1.5 Relationship between pleasure, interest and complexity when the built environment is evaluated. (Source: adapted from Lang, 1987, p. 196)

perception and evaluation of complexity: size, shape, proportion, arrangement on facades, type of sign, location on facade, presence of images, 'lettering style', predominant lettering style, letter size (height), number of chromatic groups, chromatic contrast between letters and sign background, and segregation between figure (letters or images) and sign background by size proportion. Moreover, number of commercial signs, percentage of street facade covered by these media, and square metres of signs per linear street metre are factors that increase complexity (Ashihara, 1983). In recent studies, Per Mollerup (2005) and Arthur Stamps (2004) also studied complexity and analysed the variation of commercial signs in terms of sign shape, orientation (perpendicular or parallel to the building facade), and height. All the physical characteristics of commercial signs are considered in the empirical investigation of this book.

It is necessary to define what is meant by the expression 'lettering style', mentioned above, to avoid vagueness and ambiguity of terms. This expression means a group of letters that has the same structure. According to 'The Non-Designer's Design Book' of Robin Williams (1994), lettering styles can be grouped in six categories: old style, modern, slab serif, sans serif, script, and decorative (see Figure 1.6). These categories are adopted here to classify levels of variation of 'lettering style' in commercial streetscapes. This book has not ignored the fact that there are other kinds of classification. However, if the empirical analysis had taken into account all of them, this would have been too exhaustive and added little to the objectives of the proposed intellectual enquire discussed in Chapter 4.

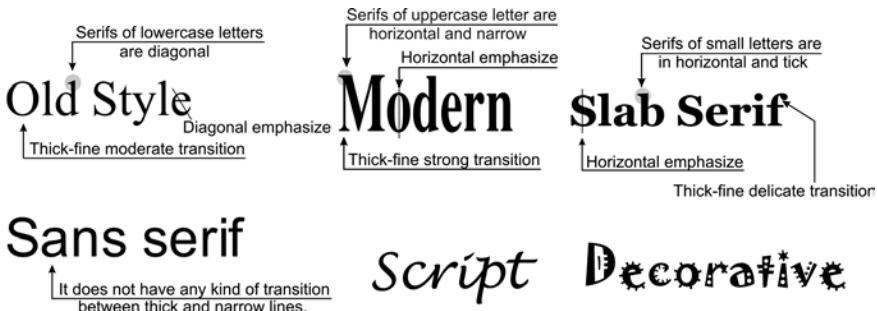


Figure 1.6 Classification of lettering styles. (Source: author)

The chromatic contrast between letters and sign background, and the segregation between figure (letters and images) and sign background are taking into account, as said before, to calculate colour variation. Chromatic contrast between letters and sign background is a common tool adopted by advertisers and shop owners to get people's attention and increase the legibility of commercial messages. According to Abraham Moles (1987), the colour contrasts most visible to human eyes are, in order of effectiveness: black on white, red on white, green on white, white on red, yellow on black, white on blue, white on green, red on yellow, blue on white, white on black, and green on red. With consideration to user perception, Moles indicates three colour combinations as the best choices to create contrasts between letters and sign background: red on light blue, red on grey, and red on yellow-green. Moreover, according to the Russian colourist researcher Natalia Naoumova (1997), user perception is more sensitive to the following complementary colour combinations: yellow and violet, blue and orange, and red and green. This is also important to note that hot colours (red, orange and yellows) segregate more effectively figure from backgrounds than cold colours (blue, green and violets) (Mollerup, 2005, Weber, 1995).

Based on the literature mentioned above, in order to analyse the complexity of a range of commercial streetscapes, the levels of chromatic contrasts between letters and sign background defined by Portella's earlier work (2003) are adopted here (see Table 1.2).

Segregation between figure (letters or images) and sign background can be promoted by the size proportion between these elements. Ralf Weber (1995) identified five principles that can influence user perception of figure and background in an aesthetic configuration: proximity, closure, concavity, symmetry and simplicity (see Table 1.3). Having these principles as a theoretical base, three different relationships are identified in commercial sign layouts: (i) the sign background is predominant, (ii) the figure is predominant, and (iii) there is a balance between figure and sign background (Portella, 2003; see Figure 1.7). Evidences indicate that an aesthetic configuration is perceived as disordered when the second relationship is predominant in commercial signs of a streetscape (Portella, 2003;

Table 1.2 Levels of chromatic contrast

Chromatic Contrast between Letters and Sign Background	LEVEL 1: HIGHEST CONTRAST White background + dark letters; dark background + white letters; light background + dark letters.
	LEVEL 2: Dark background + light colour letters.
	LEVEL 3: White background + medium colour letters; dark background + medium colour letters; light background + medium colour letters; medium background + white letters; medium background + dark letters; medium background + light letters.
	LEVEL 4: LOWEST CONTRAST White background + light colour letters; dark background + dark colour letters; light background + white letters; light background + light letters; medium background + medium letters.

**Figure 1.7 Relationship between figure and commercial signage background. (Source: author)**

Weber, 1995). The three relationships showed in Figure 1.7 are taken into account here to calculate the level of complexity in commercial streetscapes.

Physical Characteristics of Buildings that increase Complexity

According to Arthur Stamps (2000), three formal aspects of building facades can influence user perception and evaluation of complexity in streetscapes: silhouette, facade details, and facade articulation (see also studies of Ching, 1996, Burden, 1995, Quilan, 1991, and Groat, 1989). Cliff Moughtin, Taner Oc and Steve Tiesdell, in their work 'Urban Design: Ornament and Decoration' (1999), focus on decorating the city and how ornament has been used to bring delight to the urban scene. This publication, together with the studies of Portella (2003) and Naoumova (1997), support that visual character and colour variation are two other important attributes related to user perception and evaluation of complexity in urban streetscapes. These five aspects are considered here to calculate the level of complexity in commercial streetscapes.

Table 1.3 Aesthetic configurations that influence user perception of figure and background

Principles	Description
Proximity	Larger areas tend to be perceived as background, while small areas tend to be perceived as figures.
Closure	Enclosed areas are segregated from backgrounds more easily than partially enclosed areas.
Concavity	Concave sides of a contour increase user perception of figures more than convex sides.
Symmetry	Symmetrical texts or images tend to be perceived as figures.
Simplicity	Simple and regular texts or images are perceived as figures more easily.

Source: Weber, 1995, pp. 229–230

(i) Silhouette

Silhouette refers to the shape perimeter of a building and, when a street facade is analysed, it corresponds to the shape perimeter of all buildings that form the streetscape (see Figure 1.8) (Stamps, 2000). Studies have suggested that variation of formal aspects of silhouette influence user perception and evaluation of complexity; they also indicate that levels of complexity can be predicted from variation of objective geometrical properties of architectural shapes, such as heights, intervals and rhythms between segments of roofs and crowning perimeters (Heath, Smith and Lim, 2000; Weber, 1995; Quilan, 1991).

Studies related to shapes of random polygons have identified three physical characteristics of silhouettes that most influence user perception and evaluation of complexity: (i) number of turns, (ii) angular variability, and (iii) symmetry (Stamps, 2000, Quinlan, 1991). In terms of architectural shapes, Stamps (1998) investigated how variation of different physical aspects of building silhouette can predict user perception and evaluation of complexity. He demonstrated that number of vertexes has a major influence on user perception and evaluation of complexity, but he also detaches the influence of asymmetry and number of turns in shape perimeter. His findings demonstrated that user perception and evaluation of complexity can be reduced by 25% if the building silhouette is symmetric. At the same time, he showed that variation in line length or angles does not affect the perception and evaluation of complexity. Portella (2003), in an investigation about commercial streetscapes, found that variation of building height, width and kind of crowning (such as parapet, gable, sloping roof and so on) also influence user perception and evaluation of complexity.

In this context, the following parameters are useful to calculate complexity in commercial streetscapes in terms of building silhouette: symmetry of shape perimeter of each building and the street facade as a whole, number of vertexes of the street facade, number of turns in the street facade shape perimeter, height of buildings, width of buildings, and kind of crowning. The levels of asymmetry of street facades



Figure 1.8 Example of silhouettes of streetscapes (Source: author)

defined by Portella's earlier study (2003) is also a factor that can be integrated to calculate complexity: (i) Level 1 – silhouette has a high variation (main turns on shape perimeter ≥ 6); (ii) Level 2 – silhouette has variation but some similarity can be noted (main turns on shape perimeter ≤ 5); and (iii) Level 3 – silhouette has low variation and looks almost symmetric (main turns on shape perimeter < 4).

(ii) Facade details

Facade detail is related to visual textures comprised primarily of small scale details, material, colours and patterning (Smith, 1987, Bentley et al, 1985, Brolin, 1980). According to 'Oxford Advanced Learner's English Dictionary of Current English' (2000, p.360), details refers to 'a small part of a picture or painting; the smaller or less important parts of a picture, pattern, etc. when you consider them all together (...) the small features of *sth*'. This definition is considered too vague because it does not identify through precise terms which elements can be classified as details in an architectural context. This definition just suggests that details can be everything relatively small if compared with the total area of a facade.

Taking into account the Van der Laan Theory of Architectonic Space explored by Stamps (1999a), the concept of detail can be linked to size, similarity and proximity between smaller elements of a facade. This theory suggests an objective definition for detail: an element is perceived as a detail if it is just about seven times smaller than the size of the total area of a facade; elements smaller than this proportion can still be perceived as details when similar in shape and grouped. Having this measurement as a theoretical base, Stamps' work (2000) defined three specific elements categorized as facade details: (i) trim (such as door and window frames, and railings), (ii) decorative ornaments (such as frames on base, body, and crowning of facades), and (iii) texture created by facings (such as by stones or bricks). His study suggests that the variation and quantity of these elements can increase user perception and evaluation of facade details; and trim and decorative ornaments have the most influence on this. Stamps also showed that judgement of complexity is strongly related to the amount of a facade covered by smaller elements (elements on a scale of seven times the overall length of a facade).

Another of Stamps' studies (1999b, 1999c) demonstrated that user perception and evaluation of complexity can increase through the addition of details on facades. He also indicated that users prefer streetscapes with more variation of details. He found a high correlation between user perception and evaluation of complexity in streetscapes and variation of details on facades. Similarly, Linda Groat (1987) in a paper published by the 'Journal of Environmental Psychology' more than two decades ago already showed that the level of variation of details in building facades influences user satisfaction with the appearance of public

spaces. According to Brent Brolin (1980) in 'Architecture in context: Fitting new buildings with old', when a new building is inserted in an urban setting, its details (such as textures and window frames) can help, or not, to harmonize it with the existing street character and increase the complexity of the place.

Reviewing the studies mentioned above and through systematic observations of commercial streetscapes, presence and variation of the following facade details are factors that can increase complexity of commercial streetscapes: brackets, balustrade, cornice, decorated bargeboard, decorated railing, decorated weatherboard, decorated wood pilasters, decorative draws, bands and frames, decorative gable and pent roof, decorative timber framing, engaged columns and pilasters, finial, parapet with geometric decoration, projecting cornice, structural external frames, temporary decoration (elements fixed on facades), texture created by facings, timber framing on the building top, vegetation as decoration, venetian blinds with geometric draws, and window and door frames.

Variation in architectural building styles can also influence complexity of commercial streetscapes. In general, the aesthetic composition of building facades can be classified into thirteen different architectural styles: Contemporary Box; Contemporary; Neo-Bavarian or Tourist Architecture; Modern or International Style; First Modern Period; Art Deco; Second Eclectic Period or Art Nouveau; Eclectic or Neo-Classic; Georgian with visible roof and dormer windows; Georgian; Building Stone; Medieval and Tudor with apparent timber-framing; and Medieval and Tudor (see Appendix A).

(iii) Facade articulation

Facade articulation refers to saliences and re-entrance on a physical volume or bulk (Stamps, 2000; Ching, 1996; Burden, 1995; Holgate, 1992; Nasar, 1988; Clark and Pause, 1985). This concept is related to compactness being inversely proportional. In general, to increase user perception and evaluation of facade articulation, solid plans are converted to concave or convex shapes. In other words, parts of a building are extracted or added to its original shape to reduce compactness. Arcades, vestibules, balconies and other architectural elements can reduce compactness of a building, and consequently increase articulation.

According to Francis Ching (1996) and Von Meiss et all (1993), facade articulation contribute to creating public spaces with different visual characters and increase the complexity of streetscapes due to the relationship between walls of building facades. Similarly, evidence has showed that users prefer streetscapes formed by articulated buildings to those formed by compact ones (Stamps, 2000; Weber, 1995; Nasar, 1988). Stamps' analysis (2000) demonstrated that building size is the main aspect that influences user perception and evaluation of articulation in streetscapes. Buildings which have large visual areas appear to be more massive than buildings with small visual areas; over 30% of variance in the mass judgement can be attributed to the visual area of facades. According to his study, six other physical aspects related to building facades can increase user perception and evaluation of articulation: vertical partitions, number of doors and windows,

mass broken into smaller parts, reduced thickness of vertical elements, building proportion of width to height, and presence of trees in the foreground. Variation in shape and proportion of doors and windows can also influence user perception and evaluation of articulation (see Table 1.4). The variation of these aspects is taken into account here to calculate the complexity of commercial streetscapes.

(iv) Visual character

The concept of visual character is related to physical characteristics of buildings, which face public spaces. Visual character is not defined as the context, spirit of place, social conventions or other vague notions. Definitions described in terms of 'the context', 'the whole' and any other ideas, which are formally equivalent, are aesthetic judgements related to user feelings. These expressions are too vague and cannot be applied to calculate complexity of street facades. According to Stamps (2000), visual character can be defined by similarities between physical characteristics of buildings in a streetscape. He suggests that this impression depends on the frequency of design features of facades. An experiment conducted by him (1999d), using twenty four blocks of houses as stimuli, showed that a definition of visual character can be based on the materials of facades and the mathematical three dimensional Euclidean space: (i) a defined region (block facades), (ii) a set of design features (such as architectural style, number of stories, roof type, symmetry and so on), and (iii) a critical frequency of the presence of these features in a street facade (88% of the frequency of design features, according to his study).

Visual character of commercial streetscapes can be described according to the frequency of the following design features of building facades: architectural style, number of stories, rooflines (hip roof, flat roof, and so on), and building symmetry. The variation (high or low) of these features in street facades is also considered to calculate the complexity of these settings. Taking in mind Stamps's (2000) and Weber's (1995) studies, building facades are classified into three levels of symmetry: symmetric; partially symmetric; and asymmetric (see Figure 1.9).

(v) Colour

Colour refers to visual stimuli produced in human eyes by the process of light refraction and reflection. This can also be considered a property of materials and, according to the colourist George Agoston (1979, p.7) in his well-known book 'Color theory and its application in art and design', 'a sensation produced in the brain in response to light received by the retina of the eye'. Lois Swirnoff in her work 'The Color of Cities: An International Perspective' (2000), which received an award for best book published in 2000 on Architecture and Urban Studies by the Association of American Publishers, says that 'the stimulus of colour occurs in the orchestration of connected facades on a street'. Colour is the first aspect perceived by users in public spaces and, in many cases, when applied with regard to the historic identity of the city, helps to maintain the visual quality of historic places such as in the cities of Ouro Preto and Salvador in Brazil (both are UNESCO – United Nations Educational, Scientific and Cultural Organization –

Table 1.4 Aspects of buildings that influence user perception of facade articulation

Increase compactness	Increase articulation	Elements
		Size of building.
		Horizontal and vertical partitions on facade.
		Array of doors and windows on facade (repetition, shape, and proportion).
		Broken mass on facade.
		Thickness of vertical elements on facade.
		Overall proportion of facade.
		Tree in foreground of facade.

Source: Stamps, 2000, p.54

World Heritage Centres in Brazil) (see Plate 2). More cities are paying special attention to the colour of plaster when undertaking the rehabilitation of their historic city centres. The colour project of Melilla, a Spanish exclave on the coast of North Africa, coordinated by the architect Joan Casadevall Serra, is an example of this. As David Uzzell and Ellen Jones say (2000, p.333), 'colour can be used as a unifying theme to bridge a number of scales or historic areas by acceding, balancing, or continuing themes of the building or wide context'.

Places can become unpleasant for a majority of users, and human behaviour can be affected negatively when colours are chosen and applied in public areas without being taken into account their effects on human perception (Naoumova, 1997, Küppers, 1995, Porter, 1982). Colour confusion caused by excessive chromatic variation is recognized as one of the causes of disorder in commercial streetscapes. According to the German colourist Harald Küppers (1995) in his 'Theoretical foundations of the Theory of Color', both low and high chromatic variation in commercial city centres need to be avoided: the first situation does not stimulate user interest, while the second case can decrease visual quality of streetscapes. According to Naoumova's study (1997), in many urban scenes, intense colours cover large areas of facades and 'achromatic intervals' are not applied on building facades. Her work indicated that the expression 'achromatic intervals' refers to building facades painted in colours which may vary between white and shades of grey. Her study showed that people perceive these intervals as positive aspects of

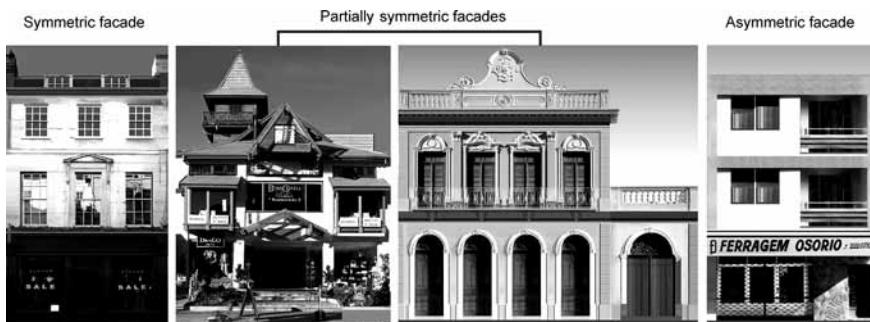


Figure 1.9 Levels of building symmetry. (Source: author)

streetscapes; if these intervals do not exist, high variation of colours can cause negative effects on user perception.

To analyse the chromatic variation of commercial streetscapes, three colour properties need to be taken into account: hue, saturation, and brightness. Hue is the attribute that differentiates one colour from another; this is a difficult concept to explain, but it is sufficient to say that when an object is perceived as 'red', this word covers the idea of a particular hue. Saturation can be described as a perception of the apparent concentration of hue. A colour is saturated when the reflected portions of the spectrum together determine the predominate hue; this means that few traces of other colours are present in the reflection. If the reflection contains many traces of other colours, the colour is said to be unsaturated. For example, pink has a lower proportion of hue than red; hence, pink has lower saturation than red. The brightness of a colour indicates how light or dark that colour is. Every colour has a certain degree of brightness: no colour is as bright as white, and all colours are brighter than black. Brightness refers to quantity of reflected light on colour surfaces (Mahnke and Mahnke, 1996; Schmuck, 1981; Thiel, 1981; Arnheim, 1974; Agoston, 1979).

Colour temperature is also another important attribute. This is related to the three primary hues: blue, red and yellow. Hues that tend to blue are recognized as cold colours, while hues that tend to red and yellow are categorized as hot colours. Orange, which is composed of red and yellow hues, is categorized as hotter than either of its both hue components. This attribute affects users physically and perceptually. Cold colours are associated with sky, ice and cold weather, reducing blood circulation and user body temperature. On the other hand, hot colours are linked to hot weather, fire and sun, increasing blood circulation and user body temperature. This attribute also helps determine how objects appear positioned in space: hot colours appear closer to the observer, while cold colours appear further from the observer (Naoumova, 1997; Thiel, 1981).

In 1983, the Frenchman Michel Albert-Vanel developed a multi-dimensional colour space, which allows colour analysis by chromatic groups: colours which have one or more properties in common can form a group. For example, one chromatic

group can be composed of colours with the same brightness but different hues and levels of saturation. Colours are grouped into categories due to commonalities among some of their attributes (hues, saturation, brightness and/or temperature). This method has been well-known as the 'Planetary Colour-system' (Albert-Vanel, 1990). This system can be useful to analyse colour variation of building facades and commercial signs, together with the relationships between chromatic groups. According to Naoumova (1997), these relationships can be harmonic or not, and they are linked with colour location in the chromatic disc (see Table 1.5 and Plate 3). Relationships between colours need to be taken into account in order to explore how streetscapes with different levels of colour harmony are perceived and evaluated by users. Similar colour analysis was originally carried out by the French colour designer Jean-Philippe Lenclos, who as a young man travelled to Japan to study architecture. His profound knowledge of colour brought him commissions in many areas including advising colour schemes for entire towns. He did studies in Greece (in 1983), Japan (in 1983), Italy (in 1994) and France (in 1989) (Lenclos and Lenclos, 1999).

Symbolic Meanings that Influence User's Judgement

Symbolic meanings are linked to the process of user cognition of public spaces. According to Stephen Carr, Mark Francis, Leanne Rivlin, and Andrew Stone (1992) and Jon Lang (1987), public spaces are full of potential symbolic meanings, and the recognition of these meanings contribute to users' feelings about the environment and themselves. These authors suggest six variables of the built environment that can carry meanings: building configuration, spatial configuration, materials, nature of illumination, colour, and non-visual environment such as sounds and the tactile and olfactory qualities of surfaces and textures. At the same time, symbolic meanings do not depend simply on the physical characteristics of places, they can be associated, for example, with the functions of places, people who lived and events that took place there. When people perceive a streetscape, they usually establish associations between aesthetic configurations (such as shapes, colour and materials) and symbolic meanings, which can be related to their past experiences, background, culture and so on. According to Malcolm Miles, Tim Hall, and Iain Borden (2000), user interpretation of the built environment depends on time, culture and circumstances. These three factors together can determine meanings connected with the physical characteristics of urban sites.

City centres are formed by the 'collective memory' of people, which is linked to symbolic meanings attributed to objects and places. The relationship between commercial signage and architecture, for example, can be part of people's memory. Symbolic meanings can contribute to forming the visual character for a place and differentiate one area from another. In addition, memory can be understood as the guiding thread of urban structure, in the way that monuments of architecture are linked to a city: examples are Big Ben in London and the Eiffel Tower in Paris

Table 1.5 Harmonic relationships between colours

Achromatic harmony	This kind of harmony is related to white, grey and black hues. The only attribute that makes one hue differ from another is brightness.
Chromatic harmony	Monochromatic harmony: different saturations of one hue are combined. Harmony by proximity: combination of hues distant from each other until 45° in the chromatic disk. Harmony by dominance: combination of hues distant from each other until 60° in the chromatic disk. Harmony by contrast: combination of hues distant from each other from 90° until 180° in the chromatic disk. Harmony by complementary colours: combination of yellow with violet (red + blue); blue with orange (yellow + red); red with green (yellow + blue).
Harmony by light – dark contrast	Contrast between white and another hue.

Source: Naoumova, 1997, p.12

(Miles, Hall and Border, 2000). As already defined by Deborah Stevenson, an expert on cultural planning and the use of cultural strategies to reimagine cities, in her book 'Cities and Urban Cultures' (2003): cities can be understood and experienced in a range of contradictory but reinforcing ways. In this regard, the interplay between the 'real' and the 'imaginary' city is fundamental. The first is a tangible city of surfaces of footpaths, buildings and roadways (formal factors), while the second refers to the place of literature, popular culture, anecdote and memory (symbolic factors). As mentioned in 'Senses of Place: Senses of Time' by Ashworth and Graham (2005), the most symbolic features of a city or town are represented by public monuments, which confer meaning to that urban context and transform neutral places into ideologically charged spaces. At the same time, in cities as Las Vegas, for example, the public monuments are the backlight billboards themselves. So, the symbolic factors linked to architecture and signage influence how people perceive and evaluate urban settings.

As discussed earlier, symbolic factors can create and/or reinforce character of places; Covent Garden Market in London is one example. According to the report 'Urban Design for Retail Environments' (2002), this place has the qualities of a traditional market centre, but the 'folk memory' is the appeal of what the area has to offer. The activities of this market provide elements that add to the shopping experience and help to define a distinct character. Shoppers will prefer to visit Covent Garden Market because it has a character, and qualities that are not found in other commercial centres in London (see Figure 1.10).

Taking the discussion above, when commercial signs harm the historic character of city centres, they affect symbolic meanings associated with these places. Historic meanings can influence user perception and evaluation of commercial city centres.

It is already well-known that buildings and public spaces which evoke historic meanings contribute to increasing the visual quality of urban sites. According to Thomas Herzog and Ronda Shier (2000) in their paper 'Complexity, Age, and Building Preference', older buildings are clearly preferred over modern buildings by many people. Their study indicates that visual richness of building facades (such as decoration and ornamentation, texture variation, natural materials, articulated walls and curves), legibility and mystery (opportunity for exploration), and building maintenance contribute to increase this preference. In addition, historic buildings can evoke positive user evaluation due to associations with the past or status. On the other hand, historic buildings can be evaluated negatively by users; however, as already argued by Thomas Herzog and Theresa Gale (1996) almost two decades ago, this may happen because of poor maintenance. Moreover, in a Arthur Stamps' study related to user satisfaction, there is no difference between professionals and lay people in terms of evaluation of historic buildings; both groups sympathize with these buildings (Stamps and Miller, 1993).

Moreover, cognitive maps demonstrate that wayfinding is based on focal points which, in many cases, correspond to buildings and public spaces with historic importance. As stated by Kevin Lynch (1960), users may evaluate positively the presence of historic buildings in city centres because of the increasing number of contemporary buildings. The British architect Harley Sherlock, in his book 'Cities Are Good for Us' (1991), argued that historic buildings are needed as much as new buildings, because they reflect the character and history of the city, and promote a sense of familiarity for users.

In this scenario, the preservation of historic buildings and public space is essential to maintain the visual quality of commercial and historic city centres. According to Portella's recent studies (2007, 2003), user satisfaction with public space tends to increase with the presence of historic buildings. Deborah Stevenson (2003) already said ten years ago that in architecture and urban design, many postmodern buildings and public spaces have attempted to create built environments which can be relevant to local communities. However, in many cases, these environments are frequently little more than a pastiche of ornamentation inspired in the appearance of historic buildings. A study described by Jack Nasar (1998) discussed Marsh's work which demonstrated that, in a primary evaluation, buildings which were erroneously perceived as historic because of their visual character were evaluated positively by architects. However, when they realized that those buildings were new copies of old exemplars, their judgement changed. Buildings that look historic by copying the aesthetic composition of historic facades were evaluated as negative by these professionals. Non-architects did not experience such a reversal in their evaluation; however, they usually prefer genuine historic buildings. These findings indicated that symbolic meanings attributed to buildings and places are not just linked to their physical characteristics; they depend on the historic context in which buildings were designed and built.

Although the importance of historic buildings is recognized by several investigations, in many commercial city centres, shop owners do not contribute



Figure 1.10 Covent Garden Market in London. The activities of this market provide elements that add to the shopping experience and help to define a distinct character (Source: author)

to the preservation of the historic heritage. Usually, historic buildings are treated unsympathetically by their retail occupants, such that shopping streets become 'a hotch potch of storefronts and fascias' (Davies, 1986). In this book, the context described in the previous paragraphs is taken into account to develop an approach capable of managing the potential conflicts between commercial signs and historic buildings in commercial city centres of different urban contexts. Furthermore, the theoretical background discussed here is applied in the empirical investigation presented later to analyse user perception and evaluation of historic city centres. This study takes into account the fact that historic meanings attributed to buildings influence user perception and evaluation of these places.

Conclusion

The following issues should be applied to explore user perception and evaluation of commercial historic city centres:

1. Historic city centres and commercial street facades are recognized as having high visual quality when there is order among physical elements of the streetscape. The following criterion is applied to define which streets

have higher or lower order in terms of commercial signs and buildings: the percentage of street facade related to buildings harmed by commercial signs. For example, a street with 90% of the street facade harmed by signs is less ordered than a street with 5% of the street facade harmed by these media. Harmed buildings are considered to be the ones where commercial signs cover elements related to facade silhouette, details and articulation.

2. The concepts of legibility and imageability are essentials to analyse the mental images that people have of commercial and historic city centres. These mental images should be explored in terms of (i) how users recognize historic city centres (such as a historic, commercial, tourist or cosmopolitan centre), (ii) whether commercial signs in historic places are identified as elements which help wayfinding, and (iii) whether these media are evaluated as positive or negative elements of city images.
3. In terms of the process of user perception, (i) the relationship between commercial signs and buildings influences the level of order of a streetscape, and (ii) the perception and evaluation of order and chaos tend to be similar between users from different places (perceptual constancy). Taking the process of user cognition, streetscapes of commercial city centres can have different symbolic meanings for distinct user groups. The combined result of both of these processes is the mental representation that users have of the public space. This mental image is the focus of analysis based on how street facades are perceived and evaluated by pedestrians.
4. The empirical investigation presented later in this book attempts to identify (i) the physical characteristics of buildings and commercial signs indicated by users as positive and negative to the appearance of historic city centres, and (ii) the intensity of influence of these characteristics on user preference and satisfaction with these places. This study compares the responses of people from different urban contexts, explores whether there are universal views among them, and identifies relationships between the physical characteristics of historic city centres and user perception and evaluation of these places.
5. The aesthetic evaluation dimensions of ‘pleasure’ and ‘interest’ are useful to identify and compare user evaluation of historic city centres. Taking the dimensions of ‘pleasure’ and ‘interest’, there are two approaches of investigation: (i) aesthetic judgement can vary between distinct users, and it is a subjective parameter; and (ii) aesthetic judgement is associated with the physical characteristics of public spaces, and it is an objective parameter. In this book, these approaches are addressed to analyse whether historic city centres where different commercial signage approaches are applied are perceived and evaluated differently by users. Semantic scales of five points with positive, negative and neutral levels are indicated for this kind of study. Since what people find beautiful or interesting may depend on the sorts of scenes they typically encounter in their everyday

life, similarities and differences between users from distinct cultures are explored here.

6. To analyse user evaluation of historic city centres, it is necessary to take into account how users feel in terms of the appearance of these places (subjective evaluation), and which physical characteristic of commercial signs and buildings influence their evaluations (objective evaluation). Users can be asked to indicate whether the appearance of buildings, commercial signs, historic buildings and places, and the number of commercial signs influence their evaluations of the appearance of historic city centres. It is also important to explore the physical characteristics of commercial signs and buildings noted as positive and negative by users in their own words. One challenge of this kind of book is to analyse user answers and interpret the data in relation to formal features of the streetscape.
7. The perceptions and evaluations of users from different cities, countries and user groups are investigated in the second part of this book (Chapter 4). The following general assumption is explored: while some visual preferences in the built environment may be influenced by the user's urban context, others (universals) may be common to the majority of people from different countries and may be useful in defining general principles that guide preference and satisfaction. Perceptions and evaluations of five user groups are discussed and compared: professionals (architects, landscape architects, planners, urban designers and civil engineers), lay people (people from other professional backgrounds), and three groups made up of residents in different cities. The appearance of historic city centres is analysed through the responses of residents, while the appearance of commercial streetscapes is analysed through the responses of residents and non-residents. It is recognized that user urban context and familiarity with the streetscape influence perception and evaluation of urban scenes.
8. In terms of formal factors related to disordered streetscapes, two main issues should be explored: the conflict between the design of commercial signs and aesthetic composition of building facades, and the visual overload provoked by excessive numbers of commercial signs, plus high variation of their physical characteristics. In this regard, variation of the following commercial signage features should be taken into account: proportion (vertical or horizontal), location (on base, body or crowning of buildings), shape, direction (vertical, horizontal or diagonal to facades), lettering size, lettering style, colour, chromatic contrast between letters and sign background, and segregation between figure and sign background by size proportion. Fragmentation of building facades by colour and commercial signs, and too high variation of building silhouettes, details and articulation are also related to disordered streetscapes. To analyse the level of commercial signage concentration in street facades, the following features need to be taken into account: square metres of commercial signs per linear street metre, number of commercial signs, number of buildings harmed by

these media and percentage of street facade and historic buildings damaged by signs.

9. In a preselected range of commercial streetscapes in different urban contexts, the second half of this book analyses (i) the level of order among commercial signs and buildings, (ii) the relationship between the aesthetic composition of these media and historic building facades, and (iii) the general visual character of commercial streets. User perception and evaluation of streetscapes are explored with regard to the following semantic differential scales: ordered-disordered, colourful-colourless, many-few (number of commercial signs and buildings harmed by these media), and much-small (coverage of buildings by commercial signage).
10. In terms of formal factors related to ordered streetscapes, the concept of complexity is related to the variation of physical characteristics of commercial signs and buildings, and order is a prerequisite for complexity. This book also seeks to identify user perception of complexity, and compares these findings with results obtained from the method adopted to calculate complexity in commercial streetscapes. To explore user evaluation of complexity, two semantic differential scales are adopted: complex-simple and high-low (in terms of variation of commercial signs and buildings).
11. To define the complexity of commercial streets in terms of commercial signs, the variation of the following features of signs should be addressed: shape, proportion, arrangement on facades, type of sign, location on facade, presence of images, lettering style, predominant lettering style, letter size (height), number of chromatic groups, chromatic contrast between letters and sign background, and segregation between figure (letters and images) and sign background by size proportion. Number of commercial signs, percentage of street facade covered by these media and square metres of signs per linear street metre should also be considered.
12. According to the literature, five main attributes need to be considered to define the level of complexity in commercial streets in terms of building variation: silhouette, facade details, facade articulation, visual character, and colour variation. The variation of the following physical features related to these attributes should be taken into account to calculate complexity:
 - i. *Silhouette*: the symmetry of shape perimeter of each building and street facade; the number of vertexes of street facade; the number of turns in shape perimeter (each building and street facade as a whole); the height of buildings; the width of buildings; and the kind of crowning.
 - ii. *Facade details*: brackets; balustrade; cornice; decorated bargeboard; decorated railing; decorated weatherboard; decorated wood pilasters; decorative draws, bands and frames; decorative gable and pent roof; decorative timber framing; engaged columns and pilasters; finial; parapet with geometric decoration; projecting cornice; structural external frames; temporary decoration (elements fixed on the wall); texture created by facings; timber framing on the top; vegetation as decoration; venetian

blinds with geometric draws; window and door frames; and architectural styles.

iii. *Facade articulation*: the following aspects of facades can increase articulation in commercial streetscapes and, consequently, increase complexity – buildings with a small visual area of facades, vertical partitions, presence of doors and windows, mass broken into smaller parts, reduced thickness of vertical elements, building proportion in terms of width to height, and presence of trees in foreground. Variation in shape and proportion of doors and windows can also influence user perception of articulation. The variation of these features is considered to calculate complexity.

iv. *Visual character*: the following design features in block facades describe the visual character of commercial streetscapes – architectural style, number of storeys; rooflines (hip roof, flat roof, and so on), and building symmetry. The variation of these aspects is considered when calculating the complexity of street facades.

v. *Colour variation*: to analyse colour variation, colours should be grouped into categories according to commonalities between some of their attributes (hues, saturation, brightness and/or temperature). Harmonic relationships between colours help to identify whether streetscapes with different kinds of colour harmony are perceived and evaluated differently by users.

13. Symbolic meanings attributed to buildings should be taken into account to develop an approach capable of managing potential conflicts between commercial signs and historic buildings in commercial city centres. This book analyses user evaluation of the appearance of commercial streetscapes, and explores whether historic meanings attributed to buildings may influence user judgements of these streets.

Having defined these preliminary theoretical concepts that guide the discussion in this book, the aim of the next chapter is to present non-physical variables that influence the operation of commercial signage controls in historic city centres. Issues related to consumer culture, city centre management, marketing the city and urban tourism are explored.

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Chapter 2

Consumer Culture, Marketing the City and Urban Tourism

This chapter analyses the importance of commercial signs in the streetscape of contemporary cities, and explores theoretical concepts that influence the design of these media and the operation of commercial signage controls in historic places. Issues linked to consumer culture, city centre management, marketing the city, and urban tourism are analysed. At the end, the conclusion identifies issues related to the operation of commercial signage controls in different urban contexts.

City Centre as an Ephemeral Place

Commercial city centres are places where different activities are carried out, such as leisure, recreation, tourism, sports and arts, being recognized as centres of leisure as well as of retailing with local regional and often larger trade markets. City centres are also public areas where human experience is transformed into signs, symbols and patterns of behaviour, which result from the combination of formal and symbolic factors of the built environment (Kelly and Kelly, 2003). These places provide a range of personal, community and commercial activities that contribute to creating their identity. In addition, they have social, economic and cultural roles to perform for the local community. In many cases, the commercial city centre coincides with the historic core of a city, and the challenge of the local authority is to combine all these functions with the preservation of historic buildings and public spaces (Miles, Hall and Border, 2004).

As mentioned by Jon Lang (2005), one of the most important professors in urban design, in many historic cities around the world, streets in central areas have been closed to vehicular traffic and converted into pedestrian malls; this transformation has intended to make life more pleasant for pedestrians, improve their shopping experience, and stimulate the economic development of the shops. Examples of this change can be seen in Carnaby Street in London, and Cornmarket Street in Oxford, England (see Figure 2.1). In central areas of cities, commercial and historic city centres are usually those that offer a sense of place through a combination of symbolic meaning attributed to historic buildings and places, and opportunities for shopping experience. Both those factors when related to ordered streetscapes increase the attraction of centres in which shopping and leisure activities take place. As Andrew and Melanie Kelly (2003) pointed out in their report 'Building Legible Cities 2', historic city centres can be occupied

simultaneously by (i) consumers interested in access, comfort and choice of shopping, (ii) tourists interested in attractions, information access, hospitality and accommodation, (iii) workers interested in jobs opportunities, training and information, (iv) residents interested in choice of houses, (v) business visitors interested in access, information, communication and accommodation, and (vi) leisure users interested in facilities, comfort, service, information and access. In this regard, as historic city centres are occupied by different user groups, with distinct interests related to what the public space might offer, these centres need to provide a high visual quality, which can be appreciated by different users in terms of historic heritage and social and economic vitality. The historic city centre of York in England is an example of a place where the preservation of historic buildings and places promotes an attractive atmosphere reinforced by different activities offered in this area, such as shopping, leisure, cultural events and so on (see Figure 2.2).

As part of the historic context of many countries, historic city centres have been through a process of physical transformation, which involves the satisfaction of new social and commercial needs. This transformation usually involves updating of historic buildings to accommodate commercial activities, and the insertion of contemporary architecture in existing streetscapes. This is a common process and there is nothing wrong with that; problems begin when historic buildings and places are harmed by this transformation. According to Deborah Stevenson's *Cities and Urban Cultures* (2003), in the past, many historic city centres were characterized by colourful, tactile, fragrant products and organized to create a range of sensory pleasures bringing user satisfaction. However, the character of many centres has been damaged by several factors, and disorder caused by commercial signs is one of them. Concerning this issue, Malcolm Miles, Tim Hall and Iain Borden in '*The City Cultures Reader*' (2004) identified that, in some countries, architects, planners and urban designers are trying to develop practical strategies to preserve the visual quality of historic city centres. These authors also demonstrated that legibility and imageability are factors that increase the visual quality and the level of order of these areas. In addition, their study emphasized that restoring meanings to damaged historic centres involves not only architectural monuments, but also claiming the symbolic meanings attributed by users to these centres and the cultural context as important dimensions of historic character.

It is therefore important to highlight some issues related to negative approaches applied to increase the visual quality of commercial and historic city centres. Standardization of design can result in all city centres looking the same, with little sense of place. On the other hand, fragmented strategies of aesthetic control can result in a series of conflicting styles, designs and finishes. In addition, the lack of a coordinated approach to guide the design of commercial signs, buildings, public spaces and their interconnectivity can make historic city centres less integrated and attractive. The intensity of use and changing demands of shop owners in how they operate their shops make the application of aesthetic controls related to commercial signs and building facades fundamental. With regard to these controls,



Figure 2.1 Example of pedestrian streets – Carnaby Street in London and Cornmarket Street in Oxford, respectively, both in England (Source: author)



Figure 2.2 Historic city centre of York in England. Commercial signage and historic heritage coexist without conflict (Source: author)

reconciling design considerations with commercial needs of shop owners and the interests of the local community is a particular concern.

Approaches to preserve the visual quality of historic city centres, in order to make these areas attractive to different users, need to go beyond techniques of traditional preservation. These techniques usually just focus on transforming preserved buildings into museums. As argued by Miles, Hall and Border (2004), aesthetic controls and guidelines cannot be applied in isolation; they must be part of a strategic approach which considers the city centre as a whole, involving a realistic vision for this area and taking into account the support and commitment of the local authority, the private sector and residents. The idea which inspires this book is to build an overall framework which gives theoretical support to the development of a general commercial signage approach that guarantees the involvement of different user groups in terms of their perceptions, evaluations and interests related to historic city centres. According to Kelly and Kelly (2003), approaches to revitalize historic city centres, which take into account the participation of different key actors, can be seen in a number of cities in England (such as in Bristol, Bath and Cambridge), Spain (such as in Barcelona), France (such as in Lille), and North America. In England, for example, public participation in design decisions related to public spaces has become popular and accepted by local authorities: the report 'By Design: Urban Design in the Planning System:

Towards Better Practice' (2000) published by the Department of the Environment, Transport and the Regions (DETR) and Commission for Architecture and the Built Environment (CABE) indicated that urban design is the art of making place for people, and the Department for Culture Media and Sport (DCMS) Annual Report (2002) highlighted the development of a social inclusion policy for the built heritage including 'local workshops across the country to explore concepts of heritage with people of all ages and varying experiences'.

The next part of this chapter identifies factors related to the transformation of the appearance of city centres in terms of the display of commercial signs. This stage analyses the cultural changes which make people accept commercial signs as part of their everyday life, and the influence of these media on their behaviour.

Phenomenon of Consumer Culture

According to 'The Anti-Aesthetic: Essays on Postmodern Culture' of Kenneth Frampton (1983) and 'The Tourist City' of Dennis Judd and Susan Fainstein (1999), the built environment reflects material and symbolic changes in society, and cities have become important sites of consumption. The transformation of the appearance of city centres does not just express historic modifications; social relations and ideologies are also reproduced through it (Gudis, 2004, Sharrett, 1989, Jameson, 1984). Historic and commercial city centres are characterized by interactions between consumption functions and commercial trends that have social consequences extending far beyond the behaviour of individuals. Shopping has become a key activity in the present day economy, and has been recognized not just as the action of buying goods, but as an entertainment and leisure activity. Places for shopping, fashion, eating, tourism, recreation and leisure have become important areas for demonstration of user social and cultural differences, as well as for the consumption of untouchable goods such as films and tourism destinations (Shane, 2005, Thorns, 2002, Zukin, 1995, Bourdieu, 1984). Fredric Jameson in his book 'Postmodernism or the Cultural Logic of Late Capitalism' (1984) almost thirty years ago already indicated that consumption has become one of the main driving forces of contemporary life.

The context described above form a phenomenon known as 'consumer culture', which has caused a significant impact on the appearance of several cities around the world. According to Christopher Sharrett (1989) and Jameson (1984), in the 'consumer culture', people tend to be recognized for 'what they can buy' as much as 'what they can do'. This is related to social status attributed to products such as places, cars, clothes, shoes and so on. People consume brands and the symbols associated to these by what David Thorns in 'The Transformation of Cities: Urban Theory and Urban Cities' (2002) calls global culture. Goods begin to have more than utilitarian value; they become part of identity, personality, self-image, social position, attitude and aspirations of people. In fact, it is not the material object that is desirable by people, but the image associated with these objects. In this

new era, the book 'Architecture and Tourism: Perception, Performance and Place' organized by Medina Lasansky and Brian McLaren (2004) argues that architects design architectural commodities that in many cases users do not need to interpret for themselves because of the symbolism already created by the consumer culture. The consumer culture has dictated semiotic significances and cultural meanings for a set of architectural forms and commercial signage design.

Consequently, 'consumer culture' can be described as the symbolism of objects. Aware of this, advertisers and shop owners devote their efforts to creating and displaying commercial signs to attend to new visual needs related to this symbolism. As argued by Neill Marshall and Peter Anthony Wood in their work 'Services and Space: Key Aspects of Urban and Regional Development' (1995) advertising strategies, media and sales practices are focused on the symbolism of objects to define how commercial signs should be designed in public spaces. As a result, the global phenomenon of 'consumer culture' manipulates the layout of these media with respect to size, proportion, colour, lettering style and size, and their location in the city centre. Consequently, these influences on commercial signage design transform the image of whole cities where goods are made available and advertised; the cultural context of consumption has become influential in the design and location of shop facades, malls and new developments in city centres. In cities of different urban contexts, standard commercial signs are displayed representing the global effect of 'consumer culture'; the most obvious consequences for the appearance of historic city centres have been standard commercial signs related to franchises, anchor stores, and shopping malls. These signs can be seen in many cities in the United States, China, South America and, increasingly, in Europe. At the same time, commercial signage has been designed to increase the commercial appeal of several historic city centres encouraging consumers to perceive these areas as centres of exchange, consumption and sources of commercial activities (Sasaki, 2002, Creswell, 1998, Marshall and Wood, 1995).

The context presented above emphasizes the reality that commercial signs are important elements of contemporary streetscapes. The presence of these media in historic city centres contributes to the satisfaction of consumers' needs, which are not necessarily related to purchase of goods; these can be linked to the visual commercial appeal produced by these kinds of media. The point is that historic cities should stimulate displays of commercial signs in order to promote a commercial appeal for city centres and, at the same time, guarantee the preservation of historic buildings and places, avoiding disordered streetscapes.

Global Context and City Metamorphose

Assuming that the design of commercial signs is often inspired by issues related to 'consumer culture', it is relevant to identify the global historic context which has stimulated the transformation of the appearance of city centres. In the mid eighteenth century and early nineteenth century, the Industrial Revolution provided the economic incentives and building technologies necessary to transform the

appearance of city centres in many countries. While before this period many places were recognized for their squares, plazas, green areas and other open spaces, during the eighteenth and nineteenth centuries some city centres came to be associated with poster advertising, department stores, and their surrounding shops (Sideris and Banerjee, 1998, Nevett, 1982). This transformation of the streetscape began in the British and American contexts but was extended rapidly to other places. According to the British author Terense Nevett (1982), in the Great Britain context, during the first half of the eighteenth century, wall-posting began to develop into an effective means of mass communication; in this period the history of advertising was mainly concentrated in London.

The urban historian Eric E. Lampard identified a new interest in mass-produced goods and standardized consumption at the end of the nineteenth century in the United States. According to him, the concept of 'consumer culture' did not exist before 1900; this began in 1920 through changes in production, distribution, and consumption style. In public spaces, the art of commercial sign display underwent a change between 1900 and the end of the twenties. The cultural, social and economic transformations, which had started with the Industrial Revolution, contributed to increasing consumer desires and changes in the appearance of city centres. Shopfronts, advertisements, and billboards had begun to promote commercial images of products and shops. The strategies in advertising changed the appearance of cities as a whole, and encouraged consumers to see products as desired objects (Taylor, 1991). The consumer boom of the 1950s and 1960s saw new and extravagant forms of advertising, such as those on display in Piccadilly Circus in London.

Taking into account European and American cities, the major change in the appearance of city centres occurred after 1895: new technologies in illumination and an interest in colour were refined into a new commercial aesthetic style. Transformation of the appearance of these centres came with the invention of artificial colours, introduction and production of window glass and plate glass, and the invention of incandescent electrical lights. The invention of neon light, around 1915, changed the streetscape of several city centres around the world contributing, by the end of the next decade, to make white light be the least desirable illumination in commercial city centres (Taylor, 1991). In the Brazilian context, this transformation was seen some years later: in the historic city of Pelotas, for example, commercial signs began to change the streetscape of the city centre in the beginning of 1940s, but the real remake happened during the sixties and seventies when artificial lights of signs transformed the city. In England, a contemporary example of the adoption of illuminated commercial signs can be noted in the Printworks project. This is Europe's first urban entertainment venue, based in Withy Grove in Manchester. Until 1986, this was a printing press, but the site stood derelict from 1987 until 1998, when work commenced on the new venue, opening in 2000. Printworks is a commercial arcade where illuminated shopfronts and advertisements are designed to create a night atmosphere marked by neon even during daytime (Figure 2.3).



Figure 2.3 The commercial arcade 'Printworks' in Manchester, England. The painting ceiling looks like sky with clouds to create a night atmosphere to the place (Source: author)

At the same time, the invention of the signboard contributed to change the way that commercial signs were designed in city centres. In the United States, in 1920, Oscar J. Gude, an American entrepreneur described by Taylor (1991) as the 'Napoleon of Publicity', invented the permanent signboard for painted advertising rather than for paper printing. Electrical signs and painted billboards became common features in commercial streetscapes in many countries after this year. As a result, people began to live in an atmosphere of promotion, advertisement and enticement, which penetrated into their culture, influencing their perception and evaluation of visual quality in public spaces. Gude defended his work as a way to integrate art and business. According to his idea, electrical adverts help to lift the 'aesthetic pleasure' of people more than any other media does. However, according to Taylor's study (1991, p.236), there are negative effects of these signs on user perception and evaluation of city centres:

Electrical signboard advertising literally forces its announcement on the vision of the uninterested as well as the interested passerby (...) Signboards are so placed that everybody must read them, and absorb them, and absorb the advertiser's lesson willingly or unwillingly (...) The constant reading of 'Buy Blank's Biscuits' (...) makes the name part of one's subconscious knowledge.

In this regard, the above paragraphs tell us the two factors which promote the major transformations in the appearance of city centres: the cultural changes related to the global phenomena of the 'consumer culture', and the invention of new technologies that influence the design of commercial signs. This discussion also highlighted the importance of these media as a mirror of a global cultural and historic evolution.

For what do we display Commercial Signage?

Having reviewed the present state of knowledge about the design and display of commercial signs in city centres, this section identifies the main functions of these media. According to the literature (such as Coelho, 2001, Hollis, 2000, Moles, 1987), commercial signage has two basic functions: (i) the identification of commercial establishments, and (ii) the persuasion of potential consumers to purchase products and go to places with this purpose. Usually, in commercial city centres, shopfronts are applied to satisfy the first function, while window displays and promotional signs painted on facades tend to address the second (see Figure 2.4). According to Abraham Moles (1987), there are also two other functions of these media, which are linked to the visual quality of public spaces: the environmental and aesthetic functions (see Table 2.1).

Table 2.1 Commercial signage functions

Environmental function		This function concerns the relationship between commercial signs and buildings. This relationship, when positive, helps wayfinding and reinforces legibility and imageability of places.
Aesthetic function	Artistic function	One main function of commercial signage is to persuade people to consume goods. As a result, commercial signs are in constant competition with each other to get people's attention. This competition promotes the increase of artistic demands. The artist function concerns commercial signs layouts displayed in city centres.
	Social function	Commercial signage reflects the 'consumer culture', which influences social behaviour of users in many contemporary cities. This is what social function is about: reflect and represent social and cultural aspects of a period of time.

Source: Moles, 1987, p.56

City Centre Management and Visual Quality

City centre management is related to the maintenance and enhancement of city vitality and viability, and the co-ordination of public, private and voluntary services and interests. In conformity with Ian Wells in his paper 'Town Centre Management: a Future for the High Street?' (1991, p.9), the concept of city centre management is described as: 'a comprehensive response to competitive pressures, which involves development, management and promotion of both public and private areas within city centres, for the benefit of all concerned'. The term 'competitive pressures' provides the key to why city centre management is necessary. This management involves dealing with the potential of a centre and promoting its wellbeing, and bringing together interests of different user groups to ensure coordination and development of services. Urban design principles are applied in city centre management to create places with distinctive visual character, safe and accessible streets and public spaces. Marketing and urban tourism strategies are also adopted to promote places as being attractive for residents and visitors (Urban Design for Retail Environments, 2002).

The term 'competitive pressures' can be related to different geographical levels. There is competition at national level between expenditure on retailing and other sectors of the economy. There is also competition between alternative locations of retail activity and commercial interests. There are competitive pressures between different areas of one city centre and between different retailers. In light of these levels, the main aim of the city centre management is to offer the opportunity for places to compete more effectively, in response to each kind of competition (Wells, 1991). Competitive pressures between commercial interests and preservation of historic city centres should be taken into account in order to investigate the issues involved in the operation of commercial signage controls. In the empirical investigation presented later in this book, a comparison is made between controls adopted in a country where a national commercial signage approach is applied to



Figure 2.4 Shopfront identifying a commercial establishment and window display persuading potential consumers to purchase products, respectively (Source: author)

preserve historic heritage, and in a country where there is no national approach to guide local authorities in the design and guidance of commercial signage controls. In this last case, commercial interests usually drive the operation of commercial signage approaches.

Evidences have suggested different functions of city centre management. In the paper 'Town Centre Management: Its Importance and Nature, Creating the Living Town Centre' presented at the Conference of the Civic Trust in London, written almost three decades ago, Balcock (1989) already pointed out that there are at least three main functions as elements of the same hierarchy: (i) creation and promotion of an image and climate of success for a city centre, (ii) development

and encouragement of social and economic activities in city centres, and (iii) management of these places in order to keep them running effectively. As a consequence of the application of these general roles, Ian Wells' study (1991) demonstrated the potential benefits that a city centre management can bring to a place: encouragement of more people into the centre, maintenance and enhancement of the trading potential of the place, heightened demand for shops in an improved environment, encouragement of owners to maintain properties, enhanced prospects of redevelopment and refurbishment of existing properties, and protection and enhancement of values in existing shopping streets.

In addition, city centre management can be used to ensure the visual quality of public areas in commercial and historic city centres. In this regard, the visual quality is related to the level of order among formal elements that form the streetscape (such as buildings and commercial signs), and the principles of legibility and imageability. Studies have already suggested that management strategies can be applied to improve the legibility and imageability of city centres (Kelly and Kelly, 2003, Weber, 1995). According to Wells (1991), city centre management is also adopted to guide future development in existing urban sites. In this way, the relevance of this management is as much about planning and economic development as related to the visual quality of public places.

An increasing number of strategies are being applied in order to enhance what city centres offer in terms of commercial activities. At the same time that retailing is considered by local authorities to be one of the main functions and land use of many city centres, some initiatives also emphasize that these places cannot be categorized as areas just for shopping. Wells (1991) indicated that other activities are necessary for adding vitality and viability to city centres, such as offices, restaurants, cafes, pubs, libraries, museums, cinemas and so on. They contribute to reinforce the character of a place as historic, tourist and/or cosmopolitan. Similarly, Carmen Hass-Klau, Graham Crampton, Clare Dowland and Inge Nold (1999) in their book 'Streets as Living Space: helping public places play their proper role' defend the view that city centre management needs to help city centres to function better, not just for transient consumers and visitors, but for those people who live and work in these places.

According to Wells (1991), the main measure of performance of city centre management is in terms of commercial profitability; successfully improved city centres can be expected to attract more people (residents, investors, visitors and so on), and therefore generate higher profits. However, other qualitative measures should also be adopted reflecting a more socially oriented analysis such as through studies of user perception and evaluation of the appearance of city centres. In terms of key actors evolved in the city centre management, there are two user groups that most influence design decisions: local authorities and retailers. In many cases, property owners and the local community are excluded from the city centre management debate. In this regard, a more integrated approach that stimulates participation of city council officers, retailers, property owners and

local community is necessary to develop urban design strategies that increase the visual quality of city centres.

City centre management is not directly related with the operation of commercial signage controls in historic cities, which is the responsibility of local planning authorities. However, city centre management deals with issues that can be affected by how commercial signage controls are approached in historic city centres, such as: the visual quality of these places, the image of city centres, the development and encouragement of social and economic activities, the protection and enhancement of values in existing shopping streets, and so on. In this case, evaluation strategies used in city centre management can be adopted, particularly for measuring the effectiveness of commercial signage controls in creating historic city centres be seen as (i) beautiful or ugly, (ii) centres of leisure, work and/or just passing through, (iii) centres of ordered or disordered signage, and (iv) places where commercial signs are positive elements of the city image and help wayfinding, or not. In this book, to compare the performance of commercial signage approaches adopted in historic city centres of different urban contexts, the perception and evaluation of residents are investigated. The empirical investigation presented in Chapter 4 identifies in three cities case studies: the groups responsible for the development of commercial signage controls, whether other professionals or local community are consulted during this process, and how this participation takes place.

Marketing the City and City Image

Cities have become increasingly shaped by the necessity to project a positive image of themselves, and there is no greater advert for cities than their own built environment and natural landscape. As discussed by Jon Lang (2005), many local authorities have recognized the importance of open-space design in creating positive images of cities. Taking this approach to thinking, marketing became a discipline of city centre management during the 1970s and 1980s. According to Hedley Smyth (1994), senior lecture at University College London, in his well-known publication ‘Marketing the City, the Role of Flagship Developments in Urban Regeneration’, strategies related to marketing the city come from different fields, such as economics, sociology, psychology, politics and biology. Marketing the city has been a concept debated by two approaches of thought: one group ties urban marketing to a deep economic analysis (such as Kearns and Philo, 1993, Harvey, 1989a, 1989b, Logan and Molotch, 1987), while another group focuses on the range and success of marketing strategies (such as Gold and Warn, 1994, Kotler, Haider and Rein, 1993, Ashworth and Voogd, 1990).

These two approaches are not exclusive and usually one complements the other. The primary concept of ‘marketing the city’ is related to the publicity field; it says that creation of strategies for selling and satisfying users requires a high quality in production of goods and delivery of services. When this principle is applied to the built environment, this can be defined as the creation of strategies to promote

city centres or entire cities for certain activities and, in some cases, to 'sell' areas of a city for living, consuming, and productive activities (Selby, 2004, Judd and Fainstein, 1999, Bill and Marion, 1997). This concept involves the redefinition of the city as an urban product, and refers to the promotion of city images in order to attract people and increase social and economic vitality. Complementing this idea, Andrew David Fretter in 'Place Marketing: a Local Authority Perspective' (1993, p.165) already said: 'Place marketing has thus become much more than merely selling the area to attract mobile companies and tourists. It can now be viewed as a fundamental part of guiding the development of places in a desired fashion'.

According to Ronan Paddison (1993) from University of Glasgow, strategies for marketing the city are centred on four main objectives: increasing the competitiveness of a city in comparison with other places, attracting investments, improving the city's image, and promoting the well-being of users. The importance of the concept 'marketing the city' in terms the economic development of cities is highlighted by Philip Kotler, Donald Haider and Irving Rein (1993, p.20): 'marketing the city is one of the most adaptive and effective approaches to the problem of urban settings'; these authors believe that cities that fail to market their images successfully can be affected by economic decline and stagnation. Several studies have already explored the relevance of this kind of thought (such as Goodwin, 1993, Holcomb, 1993, Haider, 1992, Fleming and Roth, 1991, Ashworth and Voogd, 1990).

Advertisements, the main components of marketing strategies, have been used by many cities to promote local economic development. After setting incentives and selecting desirable images that might be associated to places, a variety of advertisement packages, such as city guides, glossy brochures, fact sheets, Xeroxes of industrial commercial information, and advertisements in newspapers, are used by the local authority. For example, many marketing strategies apply the terms 'business' in slogan campaigns of cities to advertise that these places are good for investment, while in other cases, when cities are characterized by historic heritage, usually marketing strategies are designed to emphasize the advantages of these places to tourists and locals by means of analogy, for example: 'sunny places', 'blue sky', 'historic heritage', 'local culture' and so on (Landry, 2006, Knox, 2005, Hall and Hubbart, 1998).

One example of an application of strategies for marketing the city can be seen in Old Havana, the historic core of Havana, capital of Cuba. This is one of the least altered colonial cities in Latin America, and was inscribed in the UNESCO World Heritage List in 1982. In 1993, a Master Plan was designed to revitalize its historic city centre which was in ruins. Over 100 buildings have been restored, dozens more are in progress of restoration, and an equal number have been identified as sites for future work. To promote this city as a tourist destination marked by a strong colonial historic character, a series of promotional materials has been published and distributed to residents and tourists. Promotional literature and well-maintained websites designed to advertise a net of hotels located in restored colonial mansions emphasize the historic importance and the individual character of these buildings

and their surrounding areas. Pamphlets showing restored colonial buildings, maps of the city and posters were designed to promote the image of Old Havana as a well preserved historic colonial site. Even books were designed and published in order to attract tourist investors, and highlight the positive results achieved through the implementation of the Master Plan. The city centre has been packaged as a series of cultural and historic products of consumption in a manner that helps tourists navigate through the city. Although there are some criticisms related to the emphasis given in this Master Plan for the tourist industry, the strategies adopted to marketing this city centre have been successful in the promotion of the city image (Lasansky and MacLaren, 2004, Rodrigues, 1999).

In the British context, Glasgow has been seen as an example of adoption of strategies for marketing the city to improve its image. In 1983, a campaign named 'Glasgow's Miles Better' was launched; it was inspired by the earlier campaign promoted in New York in 1977 – 'I love New York', which is very well-known even nowadays. Advertisements were published in colour supplements, international business magazines, and displayed on the London Underground and the sides of red double decker buses. The idea was to change the image of Glasgow from a centre of production to a centre of consumption. This strategy was already applied in many cities in the United States; local authorities of places such as Boston, Baltimore, New York, Cleveland and other American cities had begun to apply marketing strategies to promote the image of these places as centres of innovation, commodity and quality lifestyle (Jaynes, 2005, Selby, 2004, Hall and Hubbard, 1998).

According to Smyth (1994), people and their activities give meaning and use to the built environment. In the process of marketing historic city centres or even entire cities, the images promoted through media, such as newspapers, post cards, pamphlets and websites, are not just related to the formal elements of places, but to their symbolic meanings as well. This idea is related to the field of Environment Behavioural research that has its conceptual basis on user perception and cognition of the built environment; in this study field, selling and defining a city centre requires the sale of what this place means, how it feels and what it looks like to users (Stevenson, 2003, Gold and Ward, 1994). In this sense, the process of marketing the city can start from the question: what sort of cities do users wish to see? Having answered this, by analysing user perception and evaluation of the appearance of city centres, marketing strategies can be designed and applied to intervene in the production and transmission of urban images, and to reinterpret these images as the bases of an initiative for 'selling' city centres to residents and outside users (Smyth, 1994). Symbolic factors associated with places need to be identified and packaged. For this, perception and evaluation of different user groups, such as local authorities, local communities, shop owners, visitors and investors need to be investigated. Approaches that take into account only the interests related to the development of tourist activities can create images of places not recognized by their own residents (Lasansky and MacLaren, 2004). In the case of Old Havana, for example, some promotional materials about its historic centre

include services that only interest tourists and investors, ignoring the needs and interest of the local retailers, industry and community.

In this book, the importance of the concept of marketing the city concerns its influence on the design and display of shopfronts and window displays on commercial streetscapes. For example, in places such as Piccadilly Circus and Times Square, commercial signs are designed to create images of multicultural, worldwide and international centres, which attract many users. In addition, as defended by James Trulove (2000), in an open-air shopping mall in California known as 'the Block at Orange', the commercial signage is designed to be 'reminiscent of the world's great city blocks, like Times Square, Pier 39, and Melrose Avenue, but with a California state of mind'. In this type of urban spaces, commercial signs are designed to increase social and economic vitality by maintaining order among physical elements and reinforcing the commercial appeal of these areas. At the same time, in many historic city centres, marketing approaches influence the design and control of commercial signs with particular focus on the preservation of historic buildings and places (Russo, 2002). As opposed to the case of Times Square, for example, the image promoted by marketing strategies in historic city centres, such as Oxford and York in England, emphasizes the historic appearance of the area in an ordered streetscape, and not just its commercial functions.

With regard to historic city centres in different countries, the concept of marketing the city influences the design of commercial signage controls. Through the views of city council officers involved in the design of commercial signage controls and review of guidance and legislation, the empirical investigation in this book explores the following issues: (i) whether the creation and/or promotion of a city image is part of the aims of commercial signage controls, (ii) whether local authorities are involved in marketing strategies related to the promotion of the city centre, and (iii) what image of the city centre is promoted through marketing strategies and commercial signage design. This analysis investigates whether commercial signage control approaches and strategies for marketing the city are intended to reinforce a common image of a city centre, or whether these initiatives are managed in opposite ways in terms of promotion of the city centre image.

Place Promotion as a Marketing Strategy

Place promotion is part of a system of communication in which meanings of places are encoded and decoded by advertisers, and decoded in many different ways by users (Selby, 2004, Britton, 1991, Burgess, 1990). Place promotion involves strategies which come through artistic historic approaches in which techniques of iconographic and related analysis are applied to promotional materials. Promotional messages have created images of cities communicated by different kinds of media, such as television programmes, films, advertisements, post cards, books and newspapers (Gold and Ward, 1994). Representations are pivotal in shaping the ways in which users recognize the built environment. Images of cities can be advertised through all kinds of popular culture such as magazines, newspapers, literature, art,

photographs and songs (Stevenson, 2003, p.10). According to Taylor (1991) in 'Inventing Times Square, Commerce and Culture at the Crossroads of the World 1880–1939', posters displayed on streetscapes or in the formats of postcards and pamphlets are the elements that most help in the promotion of city centre images: postcards, for example, are designed to persuade people to visit distinctive urban sites, and can lead to the creation of urban itineraries among historic and tourist points. This kind of advertisement is able to target cities as attractive places to visit and holiday in. Sometimes, posters help to reverse a nineteenth century idea that cities are unattractive places, rather than tourist destinations.

As argued by Thorns (2002), positive images of places are usually created by local authorities and private-sector boosters to encourage local residents to feel good about their city and the quality of life that places can promote. In the United States, for example, the 'Main Street Approach' is a recognized method for revitalizing commercial city centres. This is mainly a method used to revitalize older and traditional central areas. The underlying premise of this approach is to encourage economic development within the context of historic preservation in ways appropriate to the marketplace. This approach is based on four issues taken into account in the process of revitalization of central areas: organization (fundraising, committee structure, membership recruitments), promotion of the city, design of buildings and signage, and economic restructuring. According to a study carried out by Kent Robertson (2004), promotion is the most utilized component to improve the appearance of city centres. This is applied as a tool to sell a positive image of commercial city centres, and encourages consumers and investors to live, work, shop, play and invest in these areas.

One role of place promotion strategies is to communicate images of city centres for people in different places at the same time. This allows many individuals, who have never been to places like London and Paris, to have strong images of the physical and symbolic forms of Piccadilly Circus and Champs-Elysées, for example (Stevenson, 2003). These images are the result of a process which is not just related to how people respond to and interpret the place, but this also concerns configurations of meanings, feelings and expectations, which are involved in user cognition of a city. Thorns (2002) says that users no longer know a city because they have been there, seen and touched its public spaces; they shape their views of the world through the images provided by the media. When people go to Las Vegas, for example, they already have a preconceived image of this city. In this process, perception and cognition are steps that happen before users come to know the real place (see Figure 2.5).

Preconceived images that users have of cities have been analysed by cognitive and behavioural studies. These investigations are related to a broad movement which has been developed in geography, sociology and environmental psychology research fields. Since the late 1960s, researchers have examined representations of places as sources of environmental information and influence on user behaviour (Gold and Ward, 1994).



Figure 2.5 Las Vegas in USA. Users already have a preconceived image of this place due to marketing the city and urban tourism strategies (Source: Natalia Naoumova)

With regard to Smyth's study (1994), one problem can occur in the application of place promotion ideas: some user expectations can be raised to the level of fiction. In many cases, the reality of city centres does not correspond to the images advertised by promotional materials. In this regard, users may evaluate as unpleasant places that when observed through postcards are evaluated positively. According to Tim Hall and Phil Hubbard (1998), several place promotion strategies and projects of economic development can be labelled as 'carnival masks of late capitalism'. As said by David Harvey (1989a), social theorist and geographer, they create images of cities which hide the problems that need regeneration projects in the first place. In some cases, the image promoted of cities can be categorized as cosmetic make-overs (Holcomb, 1993). Another issue is stereotypic ideas of cities; once formed, stereotypes are an important category in environmental cognition. Usually, these concepts are resistant to change and supply summaries of understanding of cities. It is not uncommon for users to classify places according to categories: they assume that a set of cities, for example, have the same physical and symbolic attributes. Such stereotypes can be prejudicial to the development process, damaging city chances of gaining new investments, and affecting its reputation with residents, tourists and investors (Gold and Ward, 1994).

In light of the influence of commercial signs on the creation of stereotypes and images promoted by marketing strategies and place promotion principles, the empirical investigation in this book explores whether residents in a historic city agree that images promoted by postcards mirror the relationship between commercial signs and building facades perceived on-site. This investigation also discusses whether users prefer the images presented by these media rather than the images experienced of the real place, possible proposed actions to improve city centre image, and whether commercial signs are perceived by the local community and city council officers as positive or negative elements of the city centre image. Another issue that is also related to city centre management and can influence the development of commercial signage control approaches is the concept of urban tourism, discussed below.

Urban Tourism and City Regeneration

The concept of urban tourism is described by Dean MacCannell (quoted in Taylor, 1991, p.66) as 'a way of attempting to overcome the discontinuity of modernity, of incorporating its fragments into unified experience.' According to Stevenson (2003) and Thorns (2002), urban tourism involves the redevelopment and regeneration of the city, image-making and application of marketing strategies focused on production of leisure spaces. Moreover, in many cases, the term urban tourism has been understood as the revitalization of declining cities or parts of cities into centres of tourist destination. MacCannell's study (quoted in Stevenson, 2003) suggests that local authorities can attempt to discover or reconstruct cultural heritage and the social identity of places through urban tourism initiatives. He believes that many cities become aware of themselves as tourist attractions, such as Las Vegas and New York, because of the urban tourism process. Reynolds in his article 'Leisure revolution, prime engines of regional recovery' (quoted in Miles, Hall and Borden, 2004, p.171) says that 'the growth of the tourism industry has a great deal to do with the growth of every other industry or business: the opening up of the regions as fine places to visit means that they're better places to live in – and thus better places to work (...) a higher quality of life benefits employees'.

One purpose of urban tourism approaches is to create landscapes for international comparison; they aim to promote images of cities to compete with images of other places located in different urban contexts. Stevenson (2003, p.99) argues that what distinguishes urban tourism from traditional tourism is the way that images of places are packaged and marketed. Christopher Law's book (1992) already said that urban tourism strategies are applied to transform city centres into places of consumption and leisure. Moreover, images of cities divulged by these strategies are used to build user perception and evaluation of places. Bilbao in Spain is an example of the application of urban tourism and marketing the city strategies: since 1997 this city has been known as a popular tourist destination mainly because of the postmodern architecture of the Guggenheim Museum. This

building immediately became synonymous with the entire city and a symbol of regeneration for a declined region of Spain. The application of urban tourism strategies in order to remake a place can also be seen in places such as the Gold and Sunshine Coasts in Australia, Costa del Sol in Southern Spain, Pattaya and Phuket in the Gulf of Thailand, and Bali in Indonesia (Thorns, 2002).

Urban tourism is also related to 'tourism shopping', a term applied by Stephen Page and Colin Michael Hall (2003, pp.133–139) in 'Managing urban tourism'. In general, there is a relationship between tourism and retail activities as the majority of tourist destinations combine shopping and visiting attractions. Many successful cities in Europe have applied urban tourism strategies and promoted unique leisure shopping to establish their popularity as international destinations. In this context, the overall significance of the visual quality of public spaces is considered as essential to promote tourism in historic city centres: usually users look for a unique shopping experience which can be created through the design of shop windows, shopfronts and building facades. Page and Hall (2003) also suggest some issues that could be considered by city centre managers in order to promote urban tourism: (i) image of the place, leisure setting, display of goods on the streets, street musicians and artists, (ii) aesthetic value, image of maintenance and safety, (iii) architectural design of buildings, streets, shops, windows, sign boards and lighting, and (iv) animation, entertainment, amusement and surprise. Moreover, these authors also indicate that the following factors could be considered by local authorities to attract visitors to historic city centres: (i) marketing the destination based on an identifiable theme, using historic and cultural attractions of a place, and (ii) investing in attractive shopping galleries, facades, shopfronts, layout and design of the built environment and in the preservation of the historic architecture.

For this book, the importance of the concept of urban tourism is related to its influence on the operation of commercial signage controls adopted in historic city centres. In many cases, commercial signage controls are incorporated in urban tourism strategies as a tool to create or reinforce the visual character of a historic city. Usually, one of the aims of this kind of commercial signage control approach is to develop the local tourist economy of the city by attracting visitors. This type of control can help to promote historic city centres as tourist destinations with unique identity. However, in some cases, this can also be applied to promote a manufactured character of city centres. Examples of commercial signage controls influenced by the application of urban tourism strategies, and designed to reinforce the manufactured image of the city promoted by the local authority to attract tourist, consumers, potential residents and/or investors can be found in the same way in two different countries: in the city of Gramado in Brazil, promoted as the 'Brazilian Switzerland', and in the city of Frankenmuth in The United States, promoted as the twin city of Frankfurt in German (Figure 2.6).



Figure 2.6 Cities of Gramado in Brazil and Frankenmuth in USA, respectively. Examples of theme park cities (Source: author; Natalia Naoumova)

Urban Tourism Approaches

Urban tourism strategies can be approached in two ways: in some commercial city centres, they give more emphasis to department stores than to museums and libraries, such as in Times Square in the United States. On the other hand, in other city centres, such as in York and Bath in England, historic and cultural heritage form the basis of urban tourism strategies. In both situations, commercial signs are controlled and guided to promote an ordered streetscape; however, in the first case, these media promote the commercial appearance of the place together with historic preservation, while, in the second scenario, the signs reinforce mainly the cultural and historic heritage of the city centre. As argued by Aspa Gospodini (2004) in 'Urban Morphology and Place Identity in European Cities', built heritage is fundamental for the physiognomy of city landscape, and has been the basis of urban tourism approaches adopted in many European cities.

The discussion above demonstrates that urban tourism strategies and commercial signage controls cannot be approached in the same way for all types of city centres. First, it is necessary to identify the image that users have of a city centre, and the image that they would like to have of this place. Then, the image of the city centre promoted by urban tourism strategies can be defined and, from this start point, commercial signage controls can be designed and implemented. Visiting Paris in 1912 the novelist Edith Wharton (quoted in Taylor, 1991) described one example of misunderstanding in terms of commercial signage controls. According to her study, in that period the commercial signage was controlled and guided independently of the image of the city promoted by urban tourism approaches. She found that the local authority had adopted commercial floodlighting, which she associated with images of American cities. She said that (quoted in Taylor, 1991, p. 324): 'the great buildings, statues and fountains along the Champs-Elysées were withdrawn at dusk into silence and secrecy. Now, they are being torn from their mystery by the vulgar intrusion of floodlighting'.

In reviewing commercial signage controls and urban tourism strategies, different approaches have been applied in the French and American contexts. For example, in 1929, a Parisian law ordered the removal of electric signs that did not advertise goods sold on the premises; in other words, advertising by non-locally based national businesses was forbidden. The law also put restrictions on cigarette and automobile companies, and pleased many local people. As one resident said, 'Paris is proud to be known as the City of Light, but she wants it to be intellectual rather than electric' (Taylor, 1981, p. 236). The American approach is based on concentrating commercial signs in a limited area and, at the same time, liberating advertisements to other media such as televisions and magazines. In New York, for instance, the commercial aesthetic is concentrated in Times Square; the urban tourist and commercial signage approaches adopted require that buildings in this area include large illuminated signs as facade elements to reinforce the commercial appeal of the place. In this case, the signage creates what tourists want to see when they visit this city because the visual commercial appeal is what urban tourism

strategies promote. Moreover, in London, the City of Westminster defines a series of controls to avoid the visual quality of individual buildings, streets and areas of the city being harmed by commercial signs. However, the City Council gives special consideration to proposals for advertisements in Piccadilly Circus, where existing commercial signs make a positive contribution to the visual character and appearance of this place (Westminster City Council, January 2007).

In this regard, the second half of this book identifies whether urban tourism ideas drive the design of commercial signage regulations in order to reinforce the historic and/or the commercial appearance of historic city centres from different cultural contexts. This investigation also focuses on whether commercial signage controls are applied to promote a manufactured character for historic city centres.

Competition among City Centres

Different urban tourism and commercial signage approaches can result in distinct levels of visual quality in historic city centres, as these approaches influence the aesthetic composition of shopfronts, window displays, advertisements and building facades. In this regard, Deborah Stevenson (2003) and John Gold and Stephen Ward's book (1994) believe that cities are in constant competition with other cities in terms of visual quality, amenity and lifestyle. Ordered streetscapes, attractive public space, historic character, urban culture and social and economic vitality have become valuable commodities for sale in the global marketplace. This is because these factors can influence the images that users have of cities, and these images can promote competition among commercial and historic city centres of different countries (Zukin, 1995, 1998). According to Hall and Hubbard (1998), the increased competition between cities around the world is the main contributing factor to the insertion of place promotion strategies in the city centre management. As discussed by the Spanish sociologist Manuel Castells (1992), cities cannot be considered as individual places, but as a process by which places are connected in a global network. The discussion about cities as interconnected systems is not new as it is shown by the literature (Pred, 1997, Johnston, 1982, Hall and Hay, 1980, Brunn and Wheeler, 1980, Bourne, 1975, Berry and Horton, 1970, Berry, 1964).

The expression 'global cities' is established to demonstrate that the competition among places is also overseas; in other words, this competition happens among cities located in different urban contexts. As argued by Deborah Stevenson (2003), global cities can have more in common with each other than with their surrounding districts and cities. As described by Ashworth and Tunbridge in 'The Tourist Historic City' (1990), there are relationships of dependencies and interdependencies between cities, which form configurations of connections across many places. In Anthony King's views (1990), the idea of global city is much more about the role that the city plays in world globalization. In this respect, the possibility and composition of a global network of cities as well as universal users' perceptions and evaluations of the appearance of city centres have been accentuated. Similarly, Stevenson (2003) believes that there is a connection among almost all cities of the

world, rather than a single hierarchy. Sometimes, different cities can form a group because they have formal or/and symbolic factors in common, such as the historic cities of Minas Gerais in Brazil, which are distinguished by the concentration of colonial architecture; Times Square, Las Vegas and Piccadilly Circus for the emphases given to commercial signs; and Cambridge and Oxford for the medieval architecture of their university colleges. In many cases, commercial signage is controlled with the same general aims in cities of different places because these cities are part of the same group.

One idea of global cities emphasizes that urban problems cannot just be explored in a specific setting, limited by boundaries, and political divisions. They need to be analysed at a global level. For instance, the visual pollution caused by commercial signs needs to be analysed as a global phenomenon that has been changing the appearance of several historic cities across the world at the same level. Larry Bourne, James Simmons and William Alonso (1978) in their early study 'Systems of Cities: Readings on Structure, Growth, and Policy' already argued that in order to understand how a city changes, it is not enough to study just that particular place; it is necessary to take into account the city as part of a larger system. In this regard, to examine how commercial signage controls are approached in different places, the influence of aspects of the global context (such as consumer culture, marketing the city and urban tourism) on the design and control of commercial signs need to be analysed. Investigation of these issues by taking two or more case studies located in different urban contexts can help to define patterns related to user perception and evaluation of the built environment where commercial signage is controlled in different ways. Findings from this kind of investigation can inform theoretical concepts applied to a network of historic cities, and not only to a singular case.

The way that commercial signs are designed has strong importance for competition among historic city centres in terms of their appearance. These media can contribute to a city centre being recognized as more pleasant than another city centre. For this reason, in many historic cities, approaches to guide and control shopfronts and advertisements are adopted having as the main aim to make the city more pleasant, to be recognized as a better place than others, and consequently, to attract more people (Stevenson, 2003). This context suggests that a general commercial signage approach can be developed for historic cities in different urban contexts since these places can be part of the same net of cities in terms of the importance of preserving historic buildings and places. In general local authorities in historic cities should promote aesthetic guidance which reinforces the preservation of historic heritage. This is a commonality that could be extended to local authorities of different places, independently of their geographic localization.

Conclusion

The theoretical discussion presented in this chapter contributes to forming the theoretical and conceptual framework necessary to analyse the factors involved in the operation of commercial signage controls in historic city centres. The following issues were taken into account in this framework:

1. Assuming that city centres are places in constant transformation, in cases where the commercial centre coincides with the historic core of a city, the challenge of the local authority is to design aesthetic controls which combine interests related to retail, services and business with the preservation of historic heritage.
2. Historic city centres need to provide high visual quality recognized by different user groups in terms of historic preservation and social and economic activities. This is because these places are usually occupied by people with different perceptions, evaluations and interests in terms of what a public space should offer and look like.
3. As already discussed earlier in this chapter, legibility and imageability increase the visual quality and level of order in city centres. In addition, restoring meanings for harmed historic city centres involves claiming the symbolic meanings attributed by users to these places as important elements of the preservation of historic heritage. In this regard, not only architectural monuments should be taken into account in the revitalization of historic city centres.
4. Standardization of commercial signage design leads to all city centres looking the same, with little individual visual character. On the other hand, fragmented strategies of aesthetic controls result in series of conflicting styles, designs and finishes. In addition, the lack of a coordinated approach to guide the design of commercial signs, buildings, public spaces and their interconnectivity make city centres less integrated and attractive.
5. Taking issues related to the global phenomenon known as 'consumer culture' and the invention of new technologies that influence the design of commercial signs, this chapter highlighted the importance of these media as elements of the contemporary streetscape. The presence of these media in historic city centres contributes to satisfying consumer needs which are not necessarily related to the purchase of goods; these can be linked to the visual commercial appeal produced by these signs. Commercial signage approaches to historic city centres need to stimulate displays of commercial signs in order to promote the commercial appeal of these areas, and, at the same time, guarantee the preservation of historic buildings and places, avoiding disordered streetscapes.
6. Commercial signage has four functions: (i) identification of commercial establishments, (ii) persuasion of potential consumers to purchase products and go to places with this purpose, (iii) environmental, and (iv) aesthetic.

These functions should be considered to identify factors that need to be taken into account in the development of a general commercial signage approach guaranteeing the preservation of historic buildings and places and the good performance of those commercial signage functions.

7. Competitive pressures between commercial interests and the preservation of historic heritage should be taken into account to investigate the issues involved in the design and implementation of commercial signage controls in historic city centres of different urban contexts. Later in this book, a comparison is made between controls adopted in a country where a national commercial signage approach is applied, and in a country where there is no national approach to help local authorities in the design and guidance of commercial signage controls.
8. Apart from shopping experience, there are other activities responsible for adding vitality and viability to city centres, such as offices, restaurants, cafes, pubs, libraries, museums, cinemas and so on. These activities contribute to reinforce the character of a place as historic, tourist and/or cosmopolitan. In this regard, the development of a general commercial signage approach should consider all these land uses and the signage adopted by them.
9. Two user groups are identified as having the most influence on design decisions in city centres: local authorities and retailers. In many cases, property owners and the local community are excluded from being involved in making these decisions. In this regard, the second half of this book seeks to inform a more integrated commercial signage approach that stimulates participation of city council officers, retailers, property owners and local community in order to increase the visual quality of historic city centres.
10. The importance of the concept of 'marketing the city' concerns its influence on the design and display of shopfronts and window displays in commercial and historic streetscapes. The image promoted by marketing strategies in a historic city centre needs to emphasize the historic appearance of this area, and not just its commercial function. Through the analysis of legislation and guidelines related to commercial signage controls and views of city council officers involved in the design of these controls, it is important to explore the following issues: (i) whether creation and/or promotion of city image is part of the aims of commercial signage controls, (ii) whether local authorities are involved in marketing strategies related to the promotion of city centre image, and (iii) which image of the city centre is promoted through marketing the city strategies and commercial signage controls. One purpose of these analyses is to identify whether commercial signage controls and marketing the city strategies are approached to reinforce the same image of a city centre, or whether these initiatives are managed in opposite and contradictory ways in terms of the promotion of the place.
11. Taking the influence of commercial signs on the creation of stereotypes and images promoted by marketing the city and place promotion strategies, it is important to investigate whether residents in a historic city agree that

images promoted by postcards reflect the relationship between commercial signs and building facades perceived on-site. In an initial study, urban designers and planners should be able to identify whether users prefer the images presented by these media rather than the images experienced in the real place.

12. Urban tourism strategies can influence the operation of commercial signage controls adopted in historic city centres. Researchers should focus on the analysis whether urban tourism ideas drive the design of these controls in order to reinforce the historic and/or the commercial appearance of city centres, and compare these results with users' evaluation of the visual quality of these areas in order to define the best urban design principles to revitalize declined places.

Taking the discussion presented here, the purpose of the next chapter is to identify particular issues relating to the operation of commercial signage controls in different urban contexts by reviewing current commercial signage control approaches adopted in cities of distinct countries. Chapter 3 informs the final concepts applied to build the theoretical and conceptual framework of the empirical investigation presented in this book.

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Chapter 3

Reviewing Commercial Signage Controls in Different Countries

This chapter identifies issues taken into account in the design and implementation of commercial signage controls in different countries. Particular focus is given to approaches adopted in England and Brazil since these countries represent two different realities of how the operation of commercial signage controls can be carried out. In England, there is a national approach that helps local authorities to guide and control commercial signage in historic city centres, while in Brazil there is no national approach to control commercial signs, leaving local authorities with the responsibility to develop commercial signage controls, and to decide whether these controls are necessary in historic cities. At the end, this chapter explores which factors are involved in the operation of commercial signage controls in historic city centres, and summarizes the complete framework of the empirical investigation discussed in the second part of this book.

Commercial Signs on the Appearance of City Centres

Studies have shown that shopfronts and advertisements can influence the appearance of city centres been positively or negatively (such as Baines and Dixon, 2003; Venturi, Izenour, Steven and Brown, 2001; Moles, 1997; Taylor, 1991; Ashihara, 1983). Shopfronts and advertisements are common ways of communication. As discussed earlier, these media have promoted changes on the commercial streetscape of many cities in different countries. To the Contemporary Age, these signs are important landmarks in many cities, and, sometimes, then become the predominant features of commercial city centres. Issao Minami (2001) and Sharon Zukin (1995) of 'The Cultures of Cities' suggest that the lack of commercial signs can harm the social and economic vitality of city centres because, in many situations, it is the commercial atmosphere promoted by these media that attract consumers, visitors, and investors. In this regard, Piccadilly Circus in England and Times Square in the United States are examples of a positive influence of commercial signs on the streetscape: shopfronts and advertisements are central points of attention creating and reinforcing the character of these places (see Figure 3.1). Zukin (1995) describes Times Square as a 'centre of commercial culture' due to its cosmopolitan appearance and commercial appeal. According to Robert Venturi, Steven Izenour, Denise Scott Brown in their famous publication 'Learning from Las Vegas' (2001), commercial signs can also increase the



Figure 3.1 Piccadilly Circus in London and Times Square in New York, respectively. Commercial signs reinforce the character of these places (Source: author)

legibility and imageability of places and, consequently, contribute to wayfinding. These media can be recognized by pedestrians as landmarks that can help their navigation through city centres.

Two other positive influences that commercial signs have on streetscapes are identified in the literature: (i) first, when commercial signs are part of the aesthetic composition of historic buildings, the design of these media contribute to reinforcing the historic character of public spaces (Portella, 2003, Minami, 2001, Cauduro, 1981), (ii) second, in accordance with the Japanese architect and researcher Yoshinobu Ashihara (1983), at night shopfronts and advertisements can promote 'spectacle sensations' caused by bright colours, lights and shapes, and, as discussed by Zukin (1995), building facades plated with electrical light signs make fantasy accessible in city centres. In addition, as discussed earlier, Abraham Moles (1987) identifies two positive functions of these media – the environmental and the aesthetic.

At the same time, early studies have already identified negative influences of commercial signs on the appearance of streetscapes; these happen when these media are disordered. According to studies carried out by Portella (2003, 2007) in a historic city in Brazil, disorder caused by commercial signs in commercial areas was repeatedly mentioned by residents as threatening their quality of life. Similarly, Thomas Herzog, Stephen and Rachel Kaplan (1976) in a study carried almost four decades ago already pointed out which kind of environment users prefer among five categories of places – cultural, contemporary, commercial, entertainment, and countryside; the results indicated that most people dislike scenes with disordered commercial signs. When Jack Nasar in one of his early studies (1979) investigated the physical elements that most reduce the visual quality of city centres according to user perception and evaluation, the results showed that shopfronts and advertisements were mentioned by the majority of people. Moreover, in recent years, other authors (such as Baldock, 1989, and Michell, 1986) have reported problems that historic city centres face because of the design of commercial signs.

As briefly discussed in Chapter 1, visual overload has a negative impact on the visual quality of city centres. This overload is promoted by excessive numbers of shopfronts and advertisements with different physical characteristics such as size, colours, and lettering style. In many city centres, each retailer, attempting to call attention to his or her establishment, displays on their building facades distinctive signs that present a desirable image and stand out from the surroundings. This problem is similar to what Garret Hardin (1968), four decades ago, reported as 'The tragedy of the commons'. In other words, when each sign is observed individually, this may have a favourable image and attract people's attention, but when these media are placed side by side, the result is often chaos. According to the Brazilian researcher João Carlos Cauduro (1981), the visual overload caused by commercial signs can provoke a pathology known as 'perceptual stress' on user perception of the built environment (see Figure 3.2).



Figure 3.2 Visual overload decrease visual quality of historic city centres. Example of commercial signs displayed in a historic zone of Berlin in Germany; although the building is not a historic exemplar, the signage displayed on this harm the surrounding area of Kaiser Wilhelm Memorial Church. It is in front of the Church (Source: author)

At the same time, Moles (1987) suggests that commercial signage functions can be harmed by an excessive number of shopfronts and advertisements. There is a limit in the quantity of signs that can be perceived by users in a single vision. If this limit is exceeded, the user's capacity to read and understand commercial messages decrease. In historic city centres, problems are usually caused by the lack of commercial signage approaches to guide and control the design of shopfronts and advertisements in order to preserve historic buildings and places. In many cases, the quantity of commercial signs provokes disorder, decreasing user satisfaction with the appearance of historic cities such as Cairo and Alexandria in Egypt (Portella, 2003; see Figure 3.3). The decrease of user satisfaction can also occur when retail occupants treat historic buildings as mere background for commercial signs, such that shopping streets become 'a hotchpotch of store fronts and fascias' (Davies, 1986, p.126). Cauduro (1981) demonstrates that if the design of shopfronts and advertisements located in a specific area does not follow the same approach in order to reinforce the visual character of the place, the final result will be a chaotic streetscape. Taking this issue, the British Council of Shopping Centres has given criticism: it has sought to provide a forum in which those involved with the shopping industry can exchange ideas about how to reinforce the visual character of commercial areas (Wells, 1991).

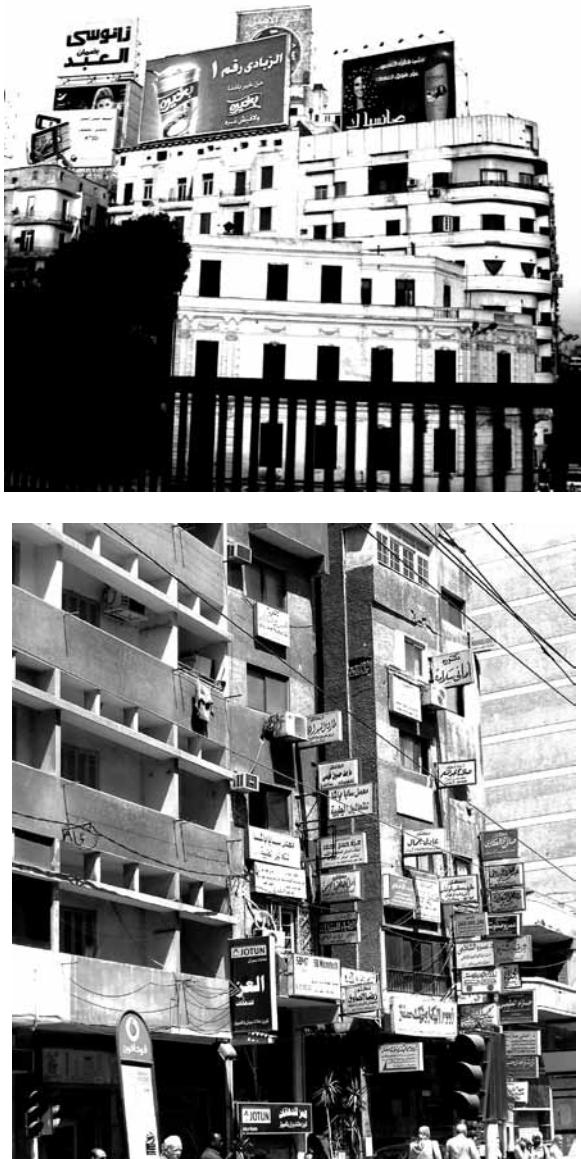


Figure 3.3 Disordered commercial signage harms the visual quality of historic cities such as Cairo and Alexandria in Egypt, respectively (Source: author)

In terms of changes in the appearance of commercial city centres caused by the 'consumer culture', the degradation of historic character in central areas has been mainly noticed since new technologies in illumination and interest in colour were refined into what Taylor (1991) described as a new 'commercial aesthetic'. Commercial aesthetic concerns the creation of merchandising and advertising for mass urban markets. Following that, many city centres have become visual illusions because of images created by an excessive number of signs and contemporary buildings designed to be a background for these media. This kind of building is anonymous and recessive, upstaged and dematerialized by commercial signs, and can be called 'non-architecture of place'. In addition, commercial signage of franchises usually contributes to increase this problem: generally, franchise companies have standard signs used in different cities; these signs do not take into account the visual character of places and therefore can harm historic city centres. According to Charles Landry (2006, p.144) in his book 'The Art of the City Making', 'Coca Cola versus local distinctiveness is a supreme dilemma of globalization. It operates in over 200 countries. Its iconic logo has a beauty, but it is increasingly intrusive'.

Concerning the discussion above, Portella (2003, 2007) and Minami (2001) found out that in many historic cities in Brazil, the relationship between commercial signs and architecture decreases the visual quality of these places and user satisfaction with those. An increasing process of degradation of historic buildings and public spaces in this country has been seen in the last decades. Until the beginning of the twentieth century, commercial signs were discreet and, usually, part of the aesthetic composition of historic buildings in Brazil. However, mainly since the second part of that century, shopfronts and advertisements have become predominant features in Brazilian city centres, and historic building facades have been approached in many places as inexpressive backgrounds for these media (Ohtake, 1982).

Another example of the process of degradation of the appearance of cities can be seen in Brasilia, the Federal Capital of Brazil. This city has been part of the List of World Heritage Sites since 1987, and is recognized as the city with the most concentration of modern architecture in the world. According to the United Nations Organization for Education, Science and Culture (UNESCO), the visual qualities of World Heritage Sites need to be constantly protected by local authorities and government. However, the visual pollution caused by commercial signs in the commercial plots of the Pilot Plan in Brasilia is enormous (Figure 3.4).

With consideration to the process of degradation of the appearance of historic city centres, the architect Ricardo Ohtake (1982, pp.13–14) says:

alterations in the streetscape happen so quickly that buildings have been taken by surprise. Before we can readapt old buildings to commercial functions, shops and malls are improvised, and old buildings are transformed into modern stores. Sometimes, two or three buildings are connected by shopfronts and advertisements displayed on their facades. In other cases, colours and decorations



Figure 3.4 Visual pollution is an increasing problem in the commercial plots of Brasília, capital of Brazil (Source: Andreia Portella)

are applied on facades to link two buildings (...) this scenario is extremely mutated and ephemeral. What we see today, tomorrow can be totally different. Today we see a building with ornaments and details on its facade, tomorrow it can be an enormous metallic box with luminous letterings and images (...).

With regard to this context, Jan Frederik Coeterier's study (1996) indicated that visual stability in commercial streetscapes is necessary for most people. In other words, constant alterations in the appearance of city centres can prejudice mental images that users have of these places. Consequently, these alterations can make wayfinding difficult. Romedi Passini's (1984, pp.93–94) well-known publication – 'Wayfinding in Architecture', identifies this problem in Montreal; commentaries of users about the case study of Place Alexis-Nihon sum up this issue:

For me, everything was confused, (...) there was a lot of lettering, arrows, (...) there were a lot of shops, colours. I don't like Alexis-Nihon, its commercial aspect with its flashes of light and colour, (...) it is impossible to get anything precise, (...) there is so much going on, that one sees nothing. It is loaded with publicity. Every shop has its sign that shines in your eyes, so one does not know where to look anymore.

In addition, in an early study developed by Design Council in association with the Royal Town Planning Institute (1979) in UK, a common problem in many contemporary cities at the present time was already identified: the fragmentation of building facades into two parts – ground floor and upper floors. Usually above



Figure 3.5 Disorder fragmentation of building facades into two parts, ground floor and upper floors, due to commercial activities is one of the main causes of low visual quality in central areas. Liverpool in England and Lisbon in Portugal, respectively (Source: author)



Figure 3.6 The building typology known as 'crowning/marquise/shop window' helps to erase the historic character of entire cities. View of one of the main streets in the historic city centre of Pelotas in Brazil (Source: author)

shop level, the architecture of facades reflects the historic character of the city, but the ground floor is converted into large expanses of glass and aluminium, in spite of the character of the original building (see Figure 3.5).

Gordon Cullen (2000) in 'The Concise Townscape' describes some of the main objections put forward against commercial signs in historic city centres: (i) signs can be incongruous and therefore injurious to the amenity, (ii) they exploit the public highway and the public has no choice but to take notice of them, and (iii) they can vulgarize a public environment and degrade public taste. In many American and South American historic cities, a common problem is identified by the literature: the design and insertion in existing historic streetscapes of a building typology known as 'crowning/marquise/shop window' (Portella, 2003, Minami, 2001, Cauduro, 1981, see Figure 3.6).

In this kind of typology, decorative elements are not part of the aesthetic composition of building facades and commercial signage is the most important feature of these buildings. Usually, the largest area of the facade is designed to be covered by shopfronts and advertisements, and an open space in the ground floor is used as shop window and main entrance. There is no conflict between commercial signage and the aesthetic composition of this kind of building;

however, many users recognize this typology as one reason for the loss of visual quality in historic city centres. They argue that commercial interests alone guide the aesthetic configuration of this kind of building, and the historic character of the place is not taken into account (Portella, 2003).

There are other issues involved in the process of degradation of the appearance of commercial city centres. Planners and urban designers cannot have a naïve perspective about the problem of visual pollution caused by commercial signs. The lack of commercial signage controls and the increased interest of shop owners in displaying big and colourful signs are not the only reasons for this problem. The publicity industry encourages competition among shop owners. Industries that design shopfronts, advertisements and billboards, for instance, persuade shop owners to buy huge signs. This business promotes the idea that to get consumers attention, shops need to display on their facades huge, colourful and many commercial signs. It is the approach adopted by this industrial sector to increase its own profits. What could happen with this sector if enormous shopfronts and advertisements were prohibited in city centres? Or if shop owners realized that too many commercial signs can decrease the visual quality of places, harm commercial signage functions, decrease the number of visitors and investors, and, consequently, reduce their profits? According to Scenic America, a nonprofit advocacy organization that works to reduce billboard blight in The United States, in its publication 'Fighting Billboard Blight: An Action Guide for Citizen and Public Officials' (1999), there is no scientific evidence that cities have been prejudiced economically from controlling commercial signs or benefited from weakening this control. However, city centres where commercial signage controls are applied have been benefited economic and socially. This positive consequence happen because places that people prefer to live, work and visit do not correspond to areas where guidelines to control shopfronts and advertisements are not adopted by the local authority.

Table 3.1 summaries the positive and negative influences of commercial signs on the visual quality of historic city centres. These should be taken into account by local authorities to control commercial signs in historic cities in order to preserve historic heritage.

Branding of Public Space in the Globalized World

This section analyses the application of aesthetic controls based on an approach that the Canadian journalist and social activist Naomi Klein (2000) describes as 'branding of public space'. This discussion focuses on the influence of this approach on the design of commercial signs and the effect of these media on the appearance of city centres and entire cities. Branding of the public space refers to the application of marketing the city and urban tourism strategies and specific aesthetic controls in order to create and promote images of places associated with specific products (goods or buildings, for example). The problem is that, in

Table 3.1 Positive and negative influences of commercial signs in historic city centres

IMPACTS OF COMMERCIAL SIGNAGE IN THE APPEARANCE OF HISTORIC CITY CENTRES	
POSITIVES IMPACTS	NEGATIVES IMPACTS
<p>1. The commercial atmosphere promoted by shopfronts and advertisements can attract consumers, visitors and investors.</p> <p>2. Commercial signage can increase legibility and imageability of places and, consequently, contribute to wayfinding.</p> <p>3. When commercial signs are part of aesthetic composition of historic buildings, their design can contribute to reinforce the historic character of public spaces.</p> <p>4. At night shopfronts and advertisements can promote 'spectacle sensations' caused by bright colours, lights and shapes.</p> <p>5. Environmental and aesthetic functions.</p>	<p>1. Disordered commercial signage can decrease user satisfaction with the appearance of places.</p> <p>2. Visual overload caused by excessive number of shopfronts and advertisements with different physical characteristics, such as size, colours and lettering style. This can cause 'perceptual stress'.</p> <p>3. Commercial signage functions can be harmed by excessive numbers of shopfronts and advertisements. Too many signs can decrease user capacity to read and understand commercial messages.</p> <p>4. Retail occupants treat historic buildings as mere background for commercial signage.</p> <p>5. Buildings designed to be just a background for commercial signs.</p> <p>6. Commercial signs of franchises, which are standard signs displayed without taking into account the local character of places.</p> <p>7. Constant alterations in the appearance of city centres can prejudice mental images that users have of these places, and make wayfinding difficult. Visual stability in commercial streetscapes is necessary for most people.</p> <p>8. Commercial signs can be incongruous and injurious to amenity.</p> <p>9. Commercial signs exploit the public highway and the public has no choice but to take notice of them.</p> <p>10. Commercial signs can vulgarize public environment and degrade public taste.</p> <p>11. Insertion of a building typology known as 'crowning/marquise/shop window' in historic city centres.</p>

some cases, this approach can harm the original character of places by promoting manufactured streetscapes. Three examples discussed by Klein (2000) can be used to illustrate this problem: Queen Street in Toronto, in Canada; Cashmere Town and the cities of Celebration and Seaside in the United States. The first two cases are analysed as examples of how commercial signs can damage the character of places when these media are ordered and do not provoke visual pollution, while the last case is explored as an example of a 'thematic park' where shopfronts and advertisements are controlled to reinforce the manufactured image of an entire city. All these cases indicate what city centre managers and local authorities in historic cities should avoid in terms of aesthetic controls related to building facades and signage.

Queen Street in Toronto, Canada

The character of Queen Street in Toronto, Canada, was originally characterized by formal and symbolic factors related to the streetscape. As described by Klein (2000), funky clothing stores, artists on the patios and graffiti art on the walls were part of the users' mental representations of this street. At the beginning of the 1990s, publishers started to enjoy the idea of commercial graffiti, and they began the advertising practice of 'building takeover.' This practice refers to painting commercial signs directly onto historic building walls, and the lettering size of each sign determining the dimensions of the advertisements. The original character of Queen Street has been harmed since this new commercial signage approach has been adopted by publishers and accepted by the local authority. This approach takes into account the commercial signage as an edifice. According to Klein (2000), walls are rented to display billboards reaching 20,000 square feet, and gradually to shopfronts and advertisements covering more and more parts of building facades.

Since 1996, Queen Street has been known as 'The Queen Street Takeover' (Klein, 2000). Between 1996 and 1997, the majority of buildings were turned into billboards, with 3-D extensions, mirrors and neon. Klein (2000) describes that advertisers liked the original character of Queen street; however, due to commercial interests, they assume that the change in the appearance of this street is the result of the contemporary phenomenon known as 'consumer culture', and they believe that these transformations could not be avoided. On the other hand, the local community did not approve this reshaping of the streetscape character, and, most residents say that 'it is not Queen anymore'. This is an example of how commercial signage can prejudice the visual quality and character of places affecting user perception and evaluation of public space. The mental images that people have of this street have been harmed because of commercial interests.

Cashmere Town in Washington, United States

The idea of 'privatised branded cities' has been applied in urban sites with regard to commercial signage controls, city centre management, marketing the city, and urban tourism strategies. The adoption of this idea can be seen in Cashmere Town, in Washington. This town of 2,500 people has as its major industry the Liberty Orchard candy factory, which has been making Applets and Cotlets chewy sweets since 1918 (Klein, 2000).

In 1997, the owner of the factory decided to leave the town unless the Town Council agreed to transform Cashmere into a tourist attraction for the Applets and Cotlets candy. According to Klein (2000), the manager of the factory wanted to display commercial signs along the highway turning the town centre into a 'gift shop'. As quoted by this author (2001, p.38), The Wall Street Journal reported the demands of the company as:

They want all road signs and official correspondence by the city to say Cashmere, Home of Applets and Cotlets. They have asked that one of the two main streets in town be changed to Cotlets Avenue, and the other one be renamed Applets Avenue. The candy maker also wants the Mayor and Council to sell City Hall to them, build new parking lots and possibly go to the bond market to start a tourism campaign on behalf of the worldwide headquarters of a company that says its story is America in a nutshell.

The aim of this industry was to control the design of any signage in the town in order to reinforce the image of its commercial products. Converting the character of cities into a consumer product can harm historic buildings and public spaces and the local essence of cities and towns. In many cases, cities are recognized by people because of their regional products and economic activities; however, these products and activities need to be approached to reinforce the local character of these places and, through this, attract potential residents, tourists, and investors. The design of commercial signage controls which do not consider the local character and history of cities, even whether these regulations promote ordered commercial signs, can be seen, therefore, as negative.

Celebration and Seaside in Florida, United States

Fake historic architecture has become very common throughout the United States: malls, shopping centres, theme parks, and even entire cities have been designed with regard to this new trend. Celebration, in Florida, is an example of an historical theme environment (Levi, 2005, Sorkin, 1992, Boyer, 1992). Visual pollution caused by shopfronts and advertisements is not a problem in this city. However, this city is an example of how commercial signage can be designed and controlled to create manufactured streetscapes without real character. The appearance of Celebration does not reflect any kind of historic character and even any changes promoted in commercial streetscapes by the 'consumer culture' (Klein, 2000). Celebration is a city where the brand becomes life itself. It was founded in 1996, and by 2000, it already had 2,744 residents, with a population of 7,427 by 2012. This is known as the first Disney city where the image of public spaces is entirely created and controlled by Disney's management. The design approach adopted in Celebration refers to the promotion of an artificial city, where the commercial signs, building facades, historic features, and public spaces are designed as a thematic park, such as Disney World, Disneyland and Euro Disney. The entire city has been designed to pretend to be old and historic (Proto, 2006, Moran, 2003, Klein, 2000).

The first idealization for Celebration was a branded place: an artificial paradise with mid-fifties futuristic technology and automation. Alternatively, managers opted to create an idealized re-interpretation of an ideal American city, which may have existed before the twentieth century. Celebration is not even a sales vehicle for Disney licensed products (Klein, 2000); this city is the opposite of

the commercial aesthetic discussed by Taylor (1991). According to Joe Moran (2003, p.1), lecturer in English and American Studies at Liverpool University, town planners wanted to create the following image for the city: 'There was once a place where neighbours greeted neighbours in the quiet summer twilight (...). There is a place that takes you back to that time of innocence (...). A place of caramel apples and cotton candy, secret forts and hopscotch on the streets'.

In Celebration, people are not exposed to excessive numbers of commercial signs and shop franchises common in other contemporary cities, and the streetscape is free of billboards and big shopfronts and advertisements. Another aspect that differentiates Celebration from other places is the amount of public space offered — parks, communal buildings, and village squares (Klein, 2000). As argued by Moran (2003), the idea was to reproduce a Midwestern American city at the end of the nineteenth century, where everyone is within walking distance of the commercial city centre. Celebration city centre is designed to be composed by small stores and have no corporate brand names.

The problem with Celebration is the lack of character. Trying to promote the life style of cities at the end of nineteenth century, city centre managers missed one important issue: the city is dynamic and an integral part of society and changes in relation to culture and period of time. The image of this place is just an illusion. In addition, in fact this city does not have real public spaces because Disney managers control everything. These managers define the kind of activity that can happen in all areas of the city. Unlike other cities where public areas, such as squares, high street and even parks, can be sites for community discussion, protests and political rallies, the only type of activity that is welcome in Celebration is that decided by its managers (Klein, 2000). Moreover, the control of user life can be seen through some regulations designed by the City Council managers, such as: 'no more than two people are allowed to sleep in one bedroom', and 'the colour of all curtains needs to be white'. The freedom to live in this manufactured city free of visual pollution caused by commercial signs costs other freedoms. According to Klein (2000), the families who have chosen to live in Celebration are living a branded life style.

The city of Seaside, which is also in Florida, is another example designed under the banner of the New Urbanism and considered one exemplar of what Jon Lang (2005) defines as 'an all-of-a-piece new town design'. This city is the antecedent of a large number of later developments including Celebration. Seaside was founded in 1981 in the Gulf of Mexico cost of Florida, and has been recognized as a themed resort for wealthy people. In Seaside, commercial signage related to brands and franchises are not displayed. According to Moran (2003), this city is nothing less than another fake urban site which became very widely known with the American movie 'Truman Show' filmed there.

In England, this kind of built environment can also be found: 'Bicester Village' in Oxfordshire, described as a 'townscape mall' by Michael Southworth (2005, p.155), and Poundbury on the outskirts of Dorchester. The same kind of fake environment can be found in the northern coast of Egypt: in Alexandria, there is a tourist village known as 'Marina Village', which was designed and built to be



Figure 3.7 Bicester Village in England and Marina Village in Egypt, respectively. Example of theme park urban sites (Source: author)

reminiscent of Venice canals. Its commercial signs are also controlled to reinforce this image of the place and avoid disorder (see Figure 3.7).

The aesthetic controls designed and applied in these places attempt to create urban sites that look what a group of town planners may believe that is the ideal image of a city, town or public space. Studies by Edward Relph (2007), Marc Auge (2000, 1995), and Mahyar Arefi (1999) describe these kinds of places as 'non-places'. These authors say that 'non-places' are related to an infusion of images and ideas from elsewhere, irrespective of local context, reflecting places that could be anywhere. In this regard, a set of images and narratives associated with other times and places are applied in the constitution of what Tim Edensor and Uma Kothari in their chapter 'Sweetening Colonialism: A Mauritian Themed Resort' (in Lasansky and MacLaren, 2004) and David Thorns (2002) describe as 'themed spaces' or 'theme parks'. According to Mark Gottdiener's study (1997), this kind of built environment has extended from designed parks, such as Disneyland and Disney World, to the urban space itself.

The study presented in this book does not intend to inform theoretical concepts to guide and control commercial signs with the aim of creating cities like Celebration and Seaside. The focus is to explore how to approach commercial signage controls as a tool to reinforce historic and local character and, at the same time, promote the commercial appeal of city centres.

How to Minimize Visual Pollution?

In order to identify what has been done to minimize visual pollution in historic city centres, this section reviews commercial signage control approaches adopted in historic cities in different urban contexts. It then explores more specific approaches adopted in England and Brazil. These countries have been chosen because they reflect two distinct perspectives of how commercial signage controls are approached in historic cities: (i) in England, a national approach to help local authorities to guide and control commercial signage in historic city centres is applied in practice, and (ii) in Brazil, there is no national approach to control commercial signage leaving local authorities with the responsibility to develop commercial signage controls, and to decide whether these controls are necessary in historic city centres.

In light of the importance of preserving the visual quality of public spaces, the European Landscape Convention was adopted on October 2000 and came into force on March 2004 by the Council of Europe, and was justified by the following general statement:

landscape has an important public-interest role in the cultural, ecological, environmental and social fields and constitutes a resource favourable to economic activity and whose protection, management and planning can contribute to job creation (...); landscape contributes to the formation of local cultures and that it is a basic component of the European natural and cultural heritage, contributing to

human well-being and consolidation of the European identity; (...) landscape is an important part of the quality of life for people everywhere: in urban areas and in the countryside; in degraded areas as well as in areas of high quality; in areas recognised as outstanding as well as everyday areas. (Council of Europe, 2000)

Many local authorities have been designing and implementing aesthetic controls in order to protect the visual quality of the natural and built environment (Boyer, 1990, Hedman and Jaszewski, 1984). As argued in Jon Lang's book (2005), design guidelines related to aesthetic controls in public spaces including building facades and commercial signs are the link between research and practice. He defines three kinds of aesthetic controls which have been adopted to increase the visual quality of urban sites: prescriptive, performance, and advisory. In this discussion, the focus is given to the first control, which describes the aesthetic pattern that buildings and signs must follow in terms of physical aspects, such as colour, height and fenestration.

According to Brenda Case Scheer (2007), Arthur Stamps (2000), Christopher Duerksen and Matthew Goebel (1999), one of the most known approaches to guide and control aesthetic variation in urban sites is the Design Review. This has been implemented in many countries, such as the United States, France, Germany, Sweden, Italy, the Netherlands, Spain and Japan. The aim of the Design Review approach is to preserve and improve the aesthetic of a place (Levi, 2005; Scheer and Preiser, 1994). Stamps (2000, p.3) defines Design Review as 'a governmental function the purpose of which is to manage the physical development of a geographical area in a manner, which reflects public determination of what that area should look like in the future'. In the United Kingdom, aesthetic controls promoted through building regulations and planning controls are also applied to minimize the visual impact of buildings in the natural and built environment (Uzzell and Jones, 2000). Ali Madanipour (1996, p.162), professor of urban design at Newcastle University, says that the Design Review definition adopted in the UK concerns the term aesthetic control, and means: 'that aspect of the regulation of development that seeks to control the physical attributes and uses of new buildings, and the spaces between them, so as to ensure a rewarding sensuous experience for the public who use the environment thus created'.

The Design Review approach often contains many guidelines to control the aesthetic variation of shopfronts, advertisements and building facades. This approach recognizes commercial signage as one of the most important features that can harm the visual quality of streetscapes. Consequently, this approach includes several guidelines related to the control of physical characteristics of shopfronts, advertisements, and window displays. In England, several physical aspects of the built environment related to architecture and commercial signs are controlled by Local Plans, such as advertisements and shopfronts, character, residual amenity, context, setting, morphology, identity, intrusions, street scene, contemporary design, elevation, style, richness and visual interest, materials, roofscape, proportions, fenestration, detailing, colour, rhythm, silhouette profile, plant, vertical and horizontal emphasis, and texture. Usually, special policies on

shopfronts are recommended to embrace alterations and installations on existing buildings, design of these media on new buildings, and for security measures (Punter and Carmona, 1997).

One study undertaken in the United States shows that 74% of the Design Review guidelines applied in that country concern guidance and control of commercial signs, 72% concern guidelines regulating building height, and 49% of them refer to guidelines related to building bulk. There are also other regulations related to the physical characteristics of building facades, such as colour variation, material, facade articulation, and fenestration (Stamps, 2000).

The support of local communities is a key factor that makes successful the implementation of aesthetic controls. Acceptance and cooperation of local residents allow the adoption of design review regulations in commercial city centres. In England, design controls are part of the development control system in which urban conservation practice helps to define the principles of contextual design and the practice of involving the local community in the decision process (Scheer and Preiser, 1994). In the United States, the power of local communities in organizing actions to increase the visual quality of cities has been recognized since the beginning of the twentieth century. In 1913, residents in Hawaii organized a group called 'Outdoor Circle', which aimed to preserve the visual character of the city by identifying and denouncing shopfronts and advertisements that harmed the historic heritage. This group also promoted a boycott of all products advertised by commercial signs which were damaging the visual quality of the city. As a result, the companies responsible for those signs began to design shopfronts and advertisements taking into consideration the local character of the city in order to avoid loss of profits (Scenic America, 1999).

Since this event, several guidelines to control commercial signs have been adopted in many American cities. For example, in 1978, an American group known as 'National Coalition to Preserve Scenic Beauty' was organized to protect the visual quality of commercial city centres. At the present time, this group has been known as 'Scenic America' and has a strong influence on the design of Design Review guidelines and other regulations related to commercial signs (Scenic America, 1999). Public participation in the development of commercial signage controls and residents' perceptions and evaluations of historic city centres are taken into account by this group as fundamental components to guide and control commercial signs.

Commercial signage of franchises is another aspect that should be taken into account. Usually, these signs have standard layouts displayed in different countries and cities, independently of the local character of each place. For this reason, in many city centres, local authorities have designed and applied guidelines to control the appearance of shopfronts and advertisements of franchises. These regulations do not intend to interfere with the identity of franchises. They just seek to encourage these companies to design commercial signs in accordance with the historic surrounding areas; features such as size, proportion and colours are advised to be adjusted to the character of the city centre. A successful example



Figure 3.8 A fast food franchise changed its standard sign to attend commercial signage design controls established by the local authority. Cambridge in England (Source: author)

of this kind of control can be seen in Cambridge in England (see Figure 3.8), Hilton Head and Sedona in the United States, and Porto Seguro in Brazil. In these places, regulations related to colours, height, size, shape, and materials of signs of franchises are adopted. The results of the application of these controls prove that identity of franchises and the local character of places can co-exist.

In many cities, commercial signage guidelines have been applied to increase social and economic vitality. Vermont, for example, was categorized as the State with the highest degree of visual pollution caused by commercial signs in the United States. This situation was harming the economic and social vitality of the cities in this State. Many tourists preferred to spend time and money in other places evaluated as more pleasant in terms of appearance than in Vermont. For these reasons, in 1968, the State authority of Vermont determined norms to control commercial signs for the preservation of local character and visual quality of public spaces. These norms were related to the variation of the physical characteristics of shopfronts and advertisements, such as height, size, shape, colour, and materials. In

1997, one study demonstrated that the local community supports these regulations, and recognizes that these are fundamental to improving the visual quality of the cities in Vermont (Scenic America, 1999).

In the next section, the issues related to commercial signage controls taken into account by local authorities in England and Brazil are explored, providing a theoretical background to investigate what needs to be considered for a general commercial signage approach applicable to historic city centres. This discussion contributes to the selection of the case studies of the empirical investigation presented later.

Planning System and Commercial Signage Controls in England and Brazil

The main difference between commercial signage controls adopted in England and Brazil is at the national or federal level of each planning system. In England, the government is a constitutional monarchy and the legal system is based on common law tradition with early Roman and modern continental influences. In this system, the Department for Communities and Local Government (DCLG) is responsible for national policies on different aspects of planning set out in a National Planning Policy Framework (NPPF), which has a presumption in favour of sustainable development. The NPPF replaced various more detailed planning policy guidance in documents called Planning Policy Statements (PPSs) and Planning Policy Guidance Notes (PPGs) in March 2012, including 'Planning Policy Guidance 19: Outdoor Advertisement Control'. The purpose of the NPPF was to reduce the amount of policy guidance set at a national level in order to encourage economic growth following the economic downturn and global financial crisis of 2007/2008. As a result the guidance on advertisements in the NPPF is limited in comparison to that which was contained in PPG19 and more specific rules on the design of advertisements are set in The Town and Country Planning (Control of Advertisements) Regulations 2007, which are explained in an illustrated booklet entitled 'Outdoor Advertisements and Signs: A Guide for Advertisers'. Compliance with the Regulations is required by the Town and Country Planning Act 1990, which is the principal planning legislation in England and Wales.

The Town and Country Planning Act 1990 has been supplemented with a number of further acts of legislation related to planning, including: the Planning (Listed Buildings and Conservation Areas) Act 1990, the Planning and Compensation Act 1991, the Planning and Compulsory Purchase Act 2004 and, more recently, the Localism Act 2011. These Acts form the basis for the management of development in England and the formulation of planning policies at a more local level, such as the district or borough and individual neighbourhoods. The introduction of the Localism Act 2011 has been responsible for a shift in the English planning system from district and wider regional planning to district and smaller scale neighbourhood planning in an effort to involve local communities more in the planning system and remove objections by local people to new development.

District level Core Strategies or 'Local Plans' are prepared by the local planning authority and contain policies to govern development in each district, which must be consistent with the principles and policies set at national level in the NPPF. Neighbourhood Plans are prepared by neighbourhood forums comprising members of the local community and contain more detailed policies for their areas, which must be consistent with the higher level Local Plan. Currently no neighbourhood plans have been adopted in England.

The Town and Country Planning (Control of Advertisements) Regulations 2007 are operated by the local planning authority of each district, borough and unitary authority in England. In addition, each authority might have more bespoke policies relating to advertisements within their Core Strategies or Local Plans. It remains to be seen whether Neighbourhood Plans will also include policies relating to advertisements within their areas, although this is considered to be unlikely as it would remove consistency across the local authority boundary. This book takes into account Core Strategies and Local Plans of English historic cities in order to analyse current commercial signage approaches implemented in historic cities in England, and make a comparison between the planning systems in England and Brazil.

The Town and Country Planning (Control of Advertisements) Regulations 2007 explains that the main purpose of the advertisement control system is to help those involved in outdoor advertising to contribute positively to the appearance of an attractive environment in cities, towns and the countryside. The advice covers pre-application discussions, deemed consent, exemptions from detailed control and temporary as well as permanent advertisements. Although many signs can be displayed without express consent, local planning authorities have powers to control the most prominent outdoor advertisement under this legislation.

There are three different groups of outdoor advertisement covered by this legislation: (i) advertisements which are deliberately excluded from control; (ii) advertisements which have 'deemed consent' meaning an application is not needed provided you stay within certain rules, and (iii) advertisements for which an application is always needed. The guidelines described in this are mainly related to the following physical aspects of commercial signs: number and size of shopfronts and advertisements per shop, duration of display, size of letters, figures, symbols or similar features, illumination, number of fascia panel, location on facades, distance between commercial sign and building facade, thickness of sign structure, percentage of building facade area covered by signage, content of commercial messages, and distance between the bottom part of the commercial sign and the sidewalk.

This legislation also explains how to obtain advertisement consents, how applications for these consents are decided, what happens after the authority decision, what happens if the planning authority refuses an advertisement consent, and, in this last case, how and when people can appeal to the Secretary of State of the Department of Communities and Local Government. It defines penalties applied when irregular commercial signs are displayed, and describes what the concepts of 'amenity' and 'public safety' means in terms of signage controls to

avoid misinterpretation of the regulations. According to The Town and Country Planning (Control of Advertisements) (England) Regulations 2007,

Amenity usually means the effect an advertisement has on the immediate neighbourhood. For example, if an advertisement is visually dominating a group of 'listed' buildings or a residential area it would be refused. But where there are large buildings and main highways, for example in industrial or commercial areas, the Council may grant consent for a large hoarding which might not look out of place.

Public safety means the safety of road traffic, other modes of transport or pedestrians. The Council assesses likely effects on driver behaviour and confusion with traffic signs or signals. The Council knows that advertisements are intended to attract people's attention, so signs would not automatically be regarded as a distraction to road users. However, what really matters is whether a sign is so distracting or confusing that it creates a danger.

As a result of the implementation of this legislation, a national approach to control commercial signage is applied in all cities, towns and villages across England helping local authorities to control the aesthetic variation of signs and preserve the historic character mainly in conservation areas. In addition, some specific regulations are designed by local authorities in accordance with the local character of each place; however, the general conceptualisation of these norms is the same across the country. The English Historic Towns Forum, founded in 1987 to establish and encourage contact between local authorities and other public, private and voluntary sector agencies, also published two guides, which established bases for the promotion of good shopfronts and advertisement design: 'Shopfronts and Adverts in Historic Towns' published in 1991, and 'Details of Good Practice in Shopfront Design' published in 1993. The principles set out in these documents are usually consulted by local authorities in the production of their own design guides.

In Brazil, general laws and regulations related to urban issues are defined by the Federal Government, and regional and local authorities take these into account to design and implement planning policies in their federal states and cities. The Brazilian government is a federal republic where the Constitution is the major law which defines the rights and obligations of authorities and citizens. The Constitution establishes which level of the government (Union, Federal States, Federal District or Municipal District) is responsible for legislating different kinds of issues. According to this Constitution, there are two articles related to the control of visual pollution caused by shopfronts and advertisements – articles 24 and 30 (Federal Government of Brazil, 2006). Other regulations, such as Federal Laws, Federal Decree of Laws, Environmental Code and Statute of the City, also present norms which can be interpreted and applied as commercial signage

controls. These were not specifically written to control these media, but they are related to all kinds of visual stimulus that affect the visual quality of public spaces.

The vagueness and ambiguity of these articles and regulations make the implementation of commercial signage controls difficult in Brazil. Here, the problem also concerns the lack of a national commercial signage approach to help local authorities to design and apply controls related to shopfronts and advertisements. Federal Laws and the State Constitutions define that local authorities are responsible for the operation of the commercial signage control system, but these regulations do not say how this control should be approached in order to help City Councils to ensure the preservation of the character of historic cities (Federal Government of Brazil, 2006; Minami and Guimaraes Jr, 2001).

In Brazil, local authorities are responsible for the design and implementation of commercial signage controls, and for the decision whether these regulations are necessary to preserve the character of historic city centres. Because of the lack of a national commercial signage approach, some City Councils design specific strategies to control commercial signs in their cities; while others just do not take any action in terms of this issue. Moreover, each City Council regulates commercial signage according to its interests and political ideologies, since there is no national guidance to ensure congruence among local authorities from different cities. The differences among commercial signage approaches adopted by local authorities in Brazil can be illustrated by the cases of Rio de Janeiro, Gramado, and Pelotas. These are historic cities where the historic core coincides with the commercial centre. However, the commercial signage approach adopted in each of these places is designed for different purposes. In the first city, commercial signage controls are developed and applied in some areas of the city centre recognized as historic by the Master Plan known as 'Cultural Corridor'; these regulations protect the visual quality of historic buildings and places. In Gramado, commercial signage controls are designed and implemented to reinforce the manufactured image of the city promoted by the City Council and advertised by marketing the city and urban tourism strategies as 'The Brazilian Switzerland'. In Pelotas, regulations related to shopfronts and advertisements are too vague and not effective for avoiding the visual pollution in the historic core. Moreover, the lack of an effective control to ensure that shop owners are respecting these controls increases the problem in this city (Portella, 2003).

Analysing historic cities in Brazil, three scenarios related to the control of commercial signs are identified: (i) commercial signage controls designed and applied to recuperate and preserve the historic character of places; these are implemented in some streets of the historic core and, later, extended to other parts of the city (such as in the city of Rio de Janeiro), (ii) commercial signage controls designed and implemented to reinforce the manufactured image of the city promoted by the local authority (such as in the cities of Gramado and Campos do Jordão), and (iii) commercial signage controls not effective to avoid visual pollution because they are too vague and ambiguous, and the local authority does not enforce shop owners to respect these regulations (such as in the cities of Pelotas, Porto Alegre and Brasilia). This book takes these last two scenarios

as case studies in Brazil because they represent different commercial signage approaches, which can affect negatively the visual quality of historic city centres.

Commercial Signage Approaches in English Historic City Centres

Commercial signage controls have been adopted in historic cities, towns and villages in England. Regulations are applied to (i) preserve the historic character of places, (ii) avoid visual pollution, and (iii) stimulate social and economic vitality attracting visitors, potential residents and investors. Participation and support of local communities and civic societies in the process of design and implementation of commercial signage controls are the most important factors related to the efficiency of the national commercial signage approach adopted in this country (Kelly and Kelly, 2003). The positive results of commercial signage controls can be seen in, for example, the streetscapes of Leeds, Dartmouth and Exeter, as discussed below. The cities of Bath, Oxford and York are also good examples, which are explored later in this chapter.

Leeds is a major city in the northern county of West Yorkshire. The city has a population of approximately 751.500 living in 320.600 households, making it one of the biggest cities in England by population (Census UK, 2011). The diverse range of shopping from individual one-off boutiques to large department stores has expanded the Leeds retail base. The city centre is characterized by shopping arcades whose visual quality is maintained through aesthetic controls related to commercial signs and shop facades. This centre can be categorized as an open shopping mall, and the covered arcades reinforce this image. The Victoria Quarter is the main shopping arcade of the city located on the main shopping street, the Briggate. This arcade is an upmarket shopping area, which consists of three blocks situated between Briggate and Vicar Lane, comprising of the County Arcade, Cross Arcade, Queen Victoria Street and King Edward Street. The Victoria Quarter was built around 1900 and restored between 1990 and 1996, during which a glass roof was erected over Queen Victoria Street (see Figure 3.9). In the city centre of Leeds, shopfronts and advertisements are controlled to avoid visual overload and promote social and economic vitality. In the arcades, rigorous commercial signage guidelines define size, colour, shape, lettering style and materials of shopfronts and window displays. These guidelines contribute to preserving the character of the place and making the shopping arcades tourist points. Residents and visitors recognize the visual quality of the streetscape of Leeds city centre, and shop owners realize that the adoption of commercial signage guidelines increases user satisfaction with the city centre contributing to their business. Patrick Nuttgens (1979), an English architect and academic, published many decades ago a book named 'Leeds: The Back to Front, Inside-out, Upside-down City', which already discussed the importance to restore and preserve Leeds' identity and character.

Another example of commercial signage controls applied to reinforce the historic character of places can be seen in Dartmouth, one of the 29 towns of Devon in the south-west of England; a tourist destination set on the banks of the



Figure 3.9 Glass roof erected over Queen Victoria Street in the city centre of Leeds in England. This street is categorized as an open shopping mall (Source: author)



Figure 3.10 In Dartmouth, England, the commercial signage control is designed to preserve the historic character of the town (Source: author)

River Dart. The town has a population of 5,605 people (Census UK, 2011), and contains a number of historic buildings, such as the Butterwalk built between 1635 and 1640. Dartmouth is described in its Local Plan, 'South Hams Local Plan – Part 2: Dartmouth Area (1989–2001)', as an 'Area Centre', which provides facilities, shops and services for the surrounding rural area. A New Local Plan has been developed and its actual stage is evidence gathering; initial public consultation is expected to happen in winter 2013 (see Figure 3.10).

This town's character is composed of buildings and streets in a layout built during the eighteenth and nineteenth centuries, commercial shipping, a fishing industry, the navy, and, in recent times, water-based recreations. Guidelines to control commercial signs are adopted in the whole town to preserve the local character and visual quality of the place. These regulations also aim to promote commercial vitality and attract visitors. The controls deal with the physical characteristics of shopfronts and advertisements, such as the size, material, colour and lettering style.

Exeter is another case where commercial signage controls have been applied to reinforce the historic character of the city. Exeter is the capital city of Devon, and its population is around 117,800 people according to the Census of 2011. This city was heavily bombed during the Second World War; particularly areas adjacent to



Figure 3.11 City centre of Exeter in England. Commercial signs reinforce the city historic character (Source: author)

the central high street and Sidwell Street were flattened. Many historic buildings were destroyed and others, including Exeter Cathedral, damaged. However, the city was rebuilt in the 1950s in an attempt to preserve its ancient character. At the present time, the city centre of Exeter is formed by a mix of contemporary and historic buildings. New buildings and commercial signs are designed to respect the aesthetic composition of remaining historic exemplars, and reinforce the historic character of this area. The commercial signage control adopted in this city refers to 'the Town and Country Planning (Control of Advertisement) (England) Regulations 2007', and seeks to ensure that shopfronts and advertisements do not harm the appearance of the city centre. In this way, the following main aspects are taken into account to the analysis of advertisement consent applications: structural integrity of buildings, harmony, vertical emphasis, link with upper floors, and facade details and decorations. These principles take into account physical features of commercial signs and their relationship with the aesthetic composition of building facades. This kind of control contributes to preserving the remaining historic character and increasing the social and economic vitality in the city centre (Exeter City Council, 2013) (see Figure 3.11).

In the next three sections, commercial signage control approaches adopted in the historic English cities of Bath, York and Oxford are investigated in more detail in terms of adopted legislations. Particular attention is given to these cities because they are characterized by strong historic character recognized across the country and their commercial city centres are located in conservation areas.

(i) City of Bath, UK

Bath is a city in South West England. This was founded on the only naturally-occurring thermal spa in the United Kingdom, and was first documented as a Roman spa. This city has a population of over 90.000 inhabitants (Census UK, 2011), and has been a World Heritage Site since 1987. The Roman and Georgian architecture, street patterns, building lines, spaces, ground surfaces, landscaping, and others physical aspects contribute to building the character of the city centre of Bath. Indeed, in order to preserve the historic character of this city, the 'Bath & North East Somerset Local Plan 2007', which is still the current Local Plan for the area, has one section totally addressed to the preservation of Listed Buildings; there is currently a total of 6,834 properties and items in the District included on the national List of Buildings of Special Architectural or Historic Interest. Under the new planning system the Local Plan will be replaced by a portfolio of planning documents called the Local Development Framework. Once adopted the Bath & North East Somerset Local Plan will be saved as part of the Local Development Framework.

The visual quality of the historic centre is also protected by the local authority through the application of aesthetic controls, which regulate commercial signs and building facades. The application of these regulations results in a harmonious relationship between commercial signs and the physical characteristics of buildings such as facing, scale, fenestration, proportions, and materials.

The current Local Plan defines guidelines which control the aesthetic variation of commercial signs, building facades, and public spaces. At the same time, this legislation recognizes that regional retail, leisure areas, and tourist attractions also build the character of the city. According to this Plan, diversity of uses and tourist attractions help to maintain the vitality and viability of the city centre. The Plan defends that local and national shops, as independent specialist retail, contribute to the economic vitality of this area. Complementary shopping activities, such as banks, building societies, restaurants, cafes and pubs, are also identified in this Local Plan as elements that reinforce the character of the city centre.

The Local Plan recognizes that commercial signs are important elements in promoting the social and economic vitality in the city centre and have significant influence on the visual quality of the streetscape. The commercial signage control approach adopted in Bath says that well designed shopfronts and advertisements can enhance the streetscape and commercial activities, and there can be room for innovation since the overall design of these media are consistent with the character of the city. This Plan emphasizes that commercial signs should not be designed in isolation; this says that design, scale and proportion of shopfronts and advertisements should be related to building facades for which they are intended, and those adjacent as well.

Two sections of the Local Plan (Bath and North East Somerset City Council, 2007, pp.188– 190) are related to shopfronts and advertisements controls: these regulate size, design, illumination, and materials of commercial signs in order to protect the character of historic buildings and public spaces (Policies BH17, BH18, BH19, BH20, BH21). This Plan also establishes that internally illuminated box fascias and projecting signs are not allowed in historic areas. There is also a supplementary guidance designed to control commercial signs in Bath: ‘Advertisements and Illuminations’ adopted since 1998. In general, this guidance is mainly related to the final layout and materials of shopfronts and advertisements and the relationship between these media with buildings and their setting. As a result of this kind of commercial signage approach, the historic character of Bath is preserved, ordered streetscapes characterize the city centre, and visual pollution caused by commercial signs is not evident in this city (see Figure 3.12). Consequently, this scenario contributes to promoting Bath as a tourist destination.

(ii) City of Oxford, UK

Oxford is a city and local government district in Oxfordshire, with a population of 151.900 inhabitants (Census UK, 2011). According to Geoffrey Tyack (1998), this is a historic world city mainly because of its architecture, and it is where the oldest university in the English-speaking world is placed, the University of Oxford. The city centre of Oxford is characterized by intense commercial activities and a high concentration of historic buildings mainly in the High Street, Queen Street, Cornmarket Street, George Street, and Broad Street.

The current Local Plan, adopted in 2005, emphasizes the importance of Oxford architectural and natural heritage, setting out the policies and proposals for the



Figure 3.12 City centre of Bath. The Local Plan emphasizes that design, scale, and proportion of commercial signs must be related to buildings (Source: author)

future development and land use for the period 2001 to 2016. Since publication of the Oxford Local Plan, many of the policies have either been superseded by more recent policies in other Local Development Framework documents. However, the policies related to the control of commercial signs (Oxford Local Plan, Chapter 12, policies RC13 and RC14) are still untouched.

This Plan recognizes the importance of commercial signs for the vitality of the city centre, but also says that these media need to be designed with regard to the historic character of the place. The highest standard of advertisement and shopfronts is required in conservation areas. According to the Plan, shopfronts and fascias are only permitted in the city centre if their design and materials respect the style, proportion, and character of existing buildings, and enhance the streetscape. In its Chapter 12, it says that shopfronts should always be seen as an integral part of the whole building facade (Oxford Local Plan 2001–2016).

With regard to advertisements, the Local Plan determines that these media can be displayed in the city centre if (i) they suit the visual setting in terms of scale, design, appearance, and materials, (ii) preserve or enhance the visual amenity of building facades, and (iii) do not prejudice highway safety or residential amenity. Letters illuminated individually on an opaque background or external illuminations are recommended. In sensitive areas of the city centre, such as in High Street, Broad Street, and other historic streetscapes, the Local Plan suggests discretion in the use of illuminated advertisements in order to protect the character and appearance of these areas. In addition, this regulates that one single projecting sign per occupier at a fascia level is considered appropriate. This also specifies that security shutters, awnings, blinds and canopies should be integrated into shopfront design, and the character of buildings should be respected (Oxford Local Plan 2001–2016).

As a result of the implementation of this commercial signage approach, Oxford is marked by ordered streetscape comprised of preserved historic buildings and intense commercial and economic vitality. This scenario makes Oxford city centre a place of trade and a tourist destination (see Figure 3.13).

(iii) City of York, UK

York is the county town of North Yorkshire, and has a population of 198,051 inhabitants (Census UK, 2011). This city is known for its history, which is preserved in its architecture and streetscape. York was founded over 2000 years ago, and, for much of the intervening period has been the main city in the North of England. The city attracts many tourists particularly to see the medieval buildings, interspersed with Roman and Viking remains. The character of York is comprised of many elements, such as the mixture of architectural styles, the tight grouping of buildings, the streetscapes, and the broken profiles of buildings and skylines. This city is the home of York Minster, the largest medieval cathedral in England, and its city centre is still surrounded by the city walls built by in 1220.

One of the most popular tourist attractions, which reflects the character of York, is the area comprising the old commercial streets in the city centre with overhanging timber-built shops, now occupied by souvenir shops as opposed to the



Figure 3.13 City centre of Oxford in England. The commercial signage control approach helps to preserve the historic character of the city as a whole (Source: author)



Figure 3.14 Shambles Street in York, England – the character of this historic medieval street is marked by retail activities and medieval buildings (Source: author)

original butchers. The identity of these streets, such as Stonegate Street, Minster Gates, and the Shambles, is mainly built by the medieval buildings and the local retail activities (see Figure 3.14). These streetscapes are characterized by local shops, which contribute to reinforcing the historic character of the city centre.

On October 2012 City of York Council Members asked officers to commence the appropriate steps to produce a local plan that is fully compliant with the National Planning Policy Framework and other relevant statutes. This new Plan will respond to contemporary issues facing York, reflecting the city's economic ambitions and helping to deliver its continued economic success, whilst building strong communities and protecting and enhancing its unique environment. This Plan is expected to be in place by 2015; until then 'the City of York Development Control Local Plan 2005' is still adopted (City of York Council, 2013).

The current Local Plan provides a local framework to guide and promote development where it is needed, and protect the quality of York historic, natural, and built environment. This Plan sets out norms to balance the need for economic growth with the protection of the historic environment, and emphasizes that economic and heritage interests do not need to be in conflict with each other. This Plan accepts that, in some cases, modern shopfronts may be appropriate and can contribute to the character and appearance of conservation areas. Its general polices suggest that new development should concern layout, scale, mass, and design compatible with buildings and spaces, using building materials appropriate to the character of each particular area. The commercial signage approach adopted in York recognizes that the preservation of historic heritage is a key strategy for promoting social and economic vitality. The intention of the Local Plan is to use the planning system to enhance the quality of life for residents and visitors (Chapter 2 of the Local Plan).

The City of York Development Control Local Plan 2005 recognizes that the display of goods through well-designed shopfronts and advertisements can contribute to create an attractive city centre. This Plan contains two general polices related to the control of commercial signs: one refers to shopfronts (General Policy 16), and the other to advertisements (General Policy 21). According to these policies, commercial signs should respect the scale, proportion, materials, and architectural style of building facades to which these are attached, and the area in which they are located. The use of standardized aluminium shopfronts and advertisements, together with plastic canopies, proportioned illuminated signs, and externally mounted roller shutters are specifically mentioned as detrimental to the visual quality of the city. Internally illuminated box signs are also not allowed on listed buildings or in conservation areas because of their negative impacts on the appearance of the city. Physical elements of commercial signs, such as size, materials, colour and illumination, are controlled. Moreover, the display of advertisements is restricted under The Town and Country Planning (Control of Advertisements) (England) Regulations 2007. The application of these norms has resulted in streetscapes where the historic character is preserved and the social and economic vitality are stimulated by commercial activities (see also Figure 2.2 in Chapter 2).

The discussion so far suggests that to understand how commercial signage controls are approached in different urban contexts, the analysis of legislation and guidelines for commercial signage controls and interviews with City Council officers are essential. Documentation review and interviews can help to identify whether commercial signs are designed as elements to reinforce the historic character of city centres, and whether the relationship of these media with the aesthetic composition of building facades is positive. The general aims of the commercial signage controls adopted in the English historic cities described above, as their positive results on the appearance of their city centres help to identify the aspects of the operation of commercial signage controls that will be explored in the empirical investigation presented in this book. The next section of this theoretical discussion examines commercial signage approaches adopted in historic cities in Brazil.

Commercial Signage Approaches in Brazilian Historic City Centres

In Brazil, there is no national guidance for the control of commercial signs in historic cities. However, in few historic cities, local commercial signage control approaches are applied, and they can be classified into two groups: (i) group one – commercial signage controls are designed and implemented in some historic cities by local authorities just when the visual pollution caused by shopfronts and advertisements has become a problem, and (ii) group two – in a minority of cases, commercial signage regulations are designed and adopted by local authorities before visual pollution becomes a problem. Usually this last control strategy is instigated by the abandon and negligence with maintenance of historic buildings and places. Both these groups represent initiatives which prove that the application of commercial signage controls is fundamental to increasing the visual quality of Brazilian historic cities. In this regard, this section analyses the Master Plans designed and implemented to control and guide commercial signage in Rio de Janeiro, Sao Paulo, Sao Luiz, and Salvador. In Brazil, these Plans represent the first initiatives to combat visual pollution in historic cities.

(i) 'Cultural Corredor' in Rio de Janeiro, Brazil

Rio de Janeiro is the capital of the Federal State of Rio de Janeiro in south-eastern Brazil. This city has a population of 6.320.446 inhabitants (Censo, 2010), and it is Brazil's second largest city. Its city centre is composed of a mix of contemporary, modern, and historic buildings, of which these last mainly date from the nineteenth century. The 'Cultural Corridor' is a Master Plan of revitalization applied in areas of Rio's historic city centre and has been adopted since 1979. In the international context, the design of this Plan was inspired by the principles defended by the World Heritage Committee established in 1976 by UNESCO. These principles were set out for the protection of historic and traditional cities and their role in the contemporary life, suggesting that historic buildings and places should be preserved, but not treated as museums. These buildings and places should be

integrated in the contemporary city life, and be able to accommodate different land uses (Choay, 2001).

The aim of 'Cultural Corridor' Master Plan has been to rescue the historic character of the city centre, and increase its visual quality. According to the Brazilian architect and researcher Evelyn Lima (2006), four factors contribute to the successfully implementation of this Plan: (i) serious commitment by the local authority, (ii) participation of different key actors in the development of the Plan, (iii) support of local newspapers and broadcast TV through divulgation of the purposes of the Plan in order to get the support of local communities, and (iv) exemption of IPUT (equivalent to Council Tax in England) to owners who agree to restore and preserve their historic properties. This Plan involves several theoretical concepts and practical management strategies which attempt to guide and control commercial signs, offer technical support for owners of historic buildings who agree to restore and preserve their proprieties according to the Plan, define land uses that should be encouraged in the city centre, and define a chromatic palette to help owners to choose an appropriate colour for their buildings (Pinheiro, 2002, Iplanrio, 1995).

Initially the Master Plan was adopted in four zones recognized by the local authority and local communities as important historic areas: Lapa Cinelândia, Praça XV, Largo São Francisco, and SAARA. In 2004, this Plan began to be applied in other areas of the city centre recognized by the local communities as culturally and historically important, such as the Lavradio Street. This street was founded in 1771 and was composed of theatres and other houses of spectacles. Since 1980, this street had been affected by the visual pollution caused by commercial signs and the abandonment and neglect of its historic buildings. The implementation of the 'Cultural Corridor' recovered the visual quality and cultural character of the street, making this place becomes a centre of cultural and social events again. The great concentration of restored historic buildings dating from the nineteenth century and ordered commercial signage has attracted many visitors, residents, and investors to this area (Pinheiro, 2002, Iplanrio, 1995).

Different groups have been involved in the implementation of this Master Plan. The 'Executive Group' is responsible for the analysis and approval of projects of restoration of historic buildings, and the 'Technical Office' is in charge of helping tenants and owners with the restoration of their historic buildings. Architects, planners, technicians and photographers are part of both these groups. Another group, known as 'Technical Camera', was instituted by the City Council in 1984, and during a period of 18 months was involved in theoretical discussions related to a more symbolic, poetic, and evocative interpretation of the importance of preserving the historic city centre of Rio. Writers, poets, philosophers and thinkers interested in popular music were part of this group. Indeed, as in the Design Review approach applied in the United States and discussed by Arthur Stamps (2000), the cooperation between the local authority and local communities has been essential for the successful implementation of this Plan (Pinheiro, 2002, Werneck, 2008).

According to Ivan Pinheiro (2002), the development and implementation of the 'Cultural Corridor' Master Plan can be divided in four stages: the implementation

(1979–1984), the structure (1984–1989), the consolidation (1989–1996), and the integration (from 1996 until now). The first period referred to studies and theoretical debates related to the identification of historic areas. This also included the design of regulations to guarantee that the strategies of preservation in these areas were in accordance with local land use legislation. The second stage was to make an inventory of all the buildings within the zones that were delimited by the Plan. This stage also focused on promoting the historic importance of these areas to the public in order to win the support of local communities. Marketing approaches were then adopted to convince residents that the visual quality and social and economic vitality of the delimited zones could be improved through the application of guidelines proposed by the Plan. During the third period, the City Council began to apply the Plan to some areas of the city centre. In the last stage, other proposals, based on the 'Cultural Corridor' approach, to preserve the historic character of the city centre have been designed. The local authority of Rio has also been applying marketing strategies and urban tourism ideas to explore the cultural, social, and economic potential of the historic areas where the Plan has been applied (Pinheiro, 2002).

The following citation highlights the general principles taken into account by the 'Cultural Corridor' Master Plan to control commercial signs (Rioarte, 2002):

There is a relationship between commercial signs and building facades. In Rio, most shopfronts and advertisements harm the character of historic buildings. Many times, these media cover partially or totally aesthetic elements of facades (...) The Plan takes into account commercial signage as an element directly linked to the aesthetic composition of buildings and public spaces. In short, one of the main aims of this Plan is to promote a harmonic relationship between commercial signs and built environment. In the past, many commercial signs displayed on facades were good examples of harmonic relationships between these media and historic buildings (...). At the present moment, these signs are more aggressive because of the commercial competition created among shops, brands and services. In the zones delimited by the 'Cultural Corridor', this competition harms the character of historic buildings and the function of commercial signs. Shop owners display on their building facade huge shopfronts and advertisements without considering the aesthetic composition of the building and its surrounding areas (...). The design of commercial signs needs to take into account the character of the place (...).

In summary, the following main features of shopfronts and advertisements are regulated by the 'Cultural Corridor' Master Plan: position (perpendicular or horizontal) and location (coronation, body or base) in relation to building facades, dimension, material, colour, distance between the bottom of the sign and the pavement, and lettering style. In addition, this Plan gives fiscal incentives to shop owners who respect the character of their proprieties (see Figure 3.15).



Figure 3.15 ‘Lapa’ is one of the main areas in Rio de Janeiro where the Corridor Cultural Master Plan has been applied to preserve the identity of historic buildings. Today this place is very touristic and known by its bars, pubs, and music shows of traditional Brazilian music (Source: Sinval Xavier)

(ii) ‘Pro Centro’ and ‘Law of the Clean City’ in Sao Paulo, Brazil

Sao Paulo is the capital of the Federal State of Sao Paulo in south-eastern Brazil. This city has a population of 10.434.252 million, and is the biggest city of the country (Censo, 2010). As in Rio de Janeiro, the city centre of Sao Paulo comprises contemporary, modern, and historic buildings, and many streets were characterized by historic facades harmed by commercial signs (Minani, 2001, Cauduro 1981). According to the Council of Cultural Heritage and Environmental Preservation of Sao Paulo, this city centre has the major concentration of historic buildings of the city: around 400 buildings have been recognized for their cultural and historic importance, and more than 1500 other buildings are in the process of recognition. At the same time, this area concentrates the majority of commercial signs in the entire city (Nogueira, 1996).

Before the design and application of ‘Pro Centro’ Master Plan and ‘Clean City’ Legislation, there were few regulations to control commercial signs in Sao Paulo; however they were useless because of the lack of enforcement to make sure that shop owners and advertisers were respecting them. By the beginning of 1990 decade, approximately 87% of shopfronts and advertisements were irregular

in the central area. There were around 10 million commercial signs in São Paulo; however only 100,000 were registered and 55,000 authorized by the City Council. To increase the visual pollution of this city centre, the local authority used to rent spaces in public areas, such as on trees and urban furniture, for shop owners to display any kind of commercial sign. Another problem was the advertisements painted on blank lateral walls of high buildings (Ramos, 2004).

In this context, 'Pro Centro' Master Plan was developed in 1993 to revitalize the historic city centre of São Paulo. The aim of this Plan was to increase the visual quality and social and economic activities of this centre. Its objective was to reverse the process of visual degradation of this place caused by the visual pollution provoked by shopfronts and advertisements (Rietti, Arieira, Lopez and Rei, 2002, Official Diary Journal of São Paulo, 1993). The following citation sums up the main idea which is the base of the approach adopted in this Plan:

Projects of restoration involve rehabilitation of buildings and, consequently, of the built environment as a whole (...). In order to restore and preserve historic buildings which contribute to create the character of São Paulo city centre, the visual pollution caused by commercial signs, such as fascias displayed on facades, is combated. (Official Diary Journal of São Paulo, 1993, p.10)

Interests of different key actors were taken into account in the implementation of this Master Plan. Marketing strategies were applied in order to get the support of the local community and attract investors to the city centre. This Plan was regulated by Municipal Laws.

The head of the Department of Habitation and Urban Development of the City Council of São Paulo was the manager of this Master Plan. Together with him, two groups participated in the design, discussion, and implementation of theoretical concepts and practical management strategies related to 'Pro Centro'. These groups were: (i) 'Association of Viva Centro' formed by members of the local community, and (ii) the 'Institute of Engineering and Architecture of Brazil' composed of civil engineers, urban designers, urban planners, and architects. The implementation of this Plan, as with the 'Cultural Corridor' Master Plan and the Design Review approach, demonstrated the importance of the support of local communities in order to put into practice commercial signage controls. Marketing strategies were also adopted to get the cooperation of residents in São Paulo (Official Diary Journal of São Paulo, 1993). Likewise, the 'Pro Centro' initiative stimulated the design of other plans in São Paulo with similar objectives. For example, the Plan to improve the visual quality of 'São Bento Street' and 'Florencio de Abreu Street', and the project of revitalization of 'Vieira de Carvalho Street' and 'Arouche Street' had been implemented since 1993. Another Plan of revitalization of São Paulo city centre, 'Plano Reconstruir o Centro', was adopted in 2001 in accordance with the principles defined by the 'Pro Centro' Master Plan (Portella, 2003).

In the beginning of the twenty-one century, a discussion to the creation of a major legislation to control outdoor and advertisement in all areas of the city started



Figure 3.16 City centre of São Paulo completely free of visual pollution after the implementation of the Law of Clean City by the City Council (Source: author)

in São Paulo, to end the problem of visual pollution as a whole. In December 2006, the City Councillors of São Paulo approved a new commercial signage control designed and proposed by the local planning authority. This regulation is now a municipal law known as 'Lei da Cidade Limpa nº 14.223' (Law of the Clean City). It is the more important and effective legislation about signage control in the whole country, and regulates all kinds of commercial signs displayed in São Paulo (such as billboards, shopfronts, window displays, and commercial signs displayed on urban furniture and on the sides of buses and taxis).

This control has been implemented since January 2007, and is already recognized as one of the most controversial and effective commercial signage control that has ever been applied to combat visual pollution in Brazil. Owners of franchises and worldwide known brands are opposed to this law; however, the City Council of São Paulo has been very strong in enforce the application of the policies stated by the Law (São Paulo City Council, 2007, 2006; Garcon, 2006; Rohter, 2006). The final result is streetscapes completely free of visual pollution caused by signage, the visual quality of the city has enhance significantly, and today São Paulo is known as the city more ordered in terms of signage in Brazil (see Figure 3.16).

(iii) 'Reviver Project' in Sao Luis, Brazil

Sao Luis is the capital of the Federal State of Maranhao. This city is located in the northeast coast of Brazil, and has a population of 1.011.943 inhabitants (Censo, 2010). This city is known for its ceramics which most buildings in the historic centre are covered with. The city centre is composed of around 3,500 Portuguese colonial buildings across 220 hectares. Around 2,500 buildings are protected by regional laws related to the historic heritage of the State, and 1,000 buildings are looked after by IPHAN (Brazil's Institute of Historic and Artistic National Heritage). In the beginning of the 1980 decade, an economic decline had reached the central area contributing to the abandon of some historic buildings and negligence with the preservation of others by shop owners, residents, and the local authorities. Aware of this problem, the City Council developed an extensive program known as 'Reviver Project'. This Plan was adopted in different stages as discussed later.

'Reviver Project' is a Master Plan of restoration and preservation of the historic city centre of Sao Luis. This Plan differs from the ones applied in Rio and Sao Paulo: this was not implemented because visual pollution was harming the appearance of historic buildings. The design of this Plan was intended to address the need for the preservation and restoration of historic buildings and public spaces abandoned and neglected. This Plan also attempted to control commercial signs before they start to harm the historic character of the city centre. This Plan reflects an important change in how approaches related to commercial signage controls are designed and implemented in Brazil. Before visual pollution becomes an eminent problem, the local authority recognized that shopfronts and advertisements have a strong influence on the streetscape of the city centre, and established regulations to guide and control these media. These regulations aim to reinforce the historic character and stimulate social and economic activities in the central area.

This Master Plan has been applied in approximately 250 hectares and 3,500 historic buildings within the city centre, and implemented in five stages. The first stage (1979–1982) concerned the delimitation of zones where the restoration of historic buildings should start. In a joint action, the local community and the local authority defined specific zones, where the character of the place was harmed by the lack of preservation of historic buildings. After that, local and federal laws regulated these areas. Since this period, architects, planners and engineers have been responsible for managing this Plan; they form a group known as the 'Coordination Commission'. This group is responsible for the design of projects to revitalize the city centre, and members of the local community are able to help the development of these projects. In workshops, residents and representatives of civic societies help to define the best alternatives to preserve and restore the character of the historic city centre.

In the second period (1983–1987), the implementation of the projects of revitalization was temporarily suspended because of the lack of funding. So, the focus was given to scientific investigations related to historic aspects that characterize the city centre. Original documents dating from 1646 to 1900, which

describe the history of the city, were analysed. Field visits were also organized in order to identify historic buildings and places not included in the first stage of the Plan. The 'Commission of Historic Heritage of Sao Luiz' was formed, and, since then, has been composed by officers of IPHAN (Brazil's Institute of Historic and Artistic National Heritage), the Historic, Artistic and Landscape Heritage Department of Maranhao State, and the Planning Department of Sao Luis. This group is responsible for the analysis and coordination of projects of revitalization of the city centre. In 1986, an inventory of all buildings within the city centre recognized as historic by federal, regional and local laws was compiled. This document and general information about the 'Reviver Project' Master Plan were published as a book. This publication helped to make public the aims of the Plan on a national scale, stimulating groups from different parts of Brazil, such as universities, governments, population, architects and planners, to participate in the implementation of the Project.

The third stage (1987–1990) was related to urban renovation projects (such as water supply, urban drainage, and underground electricity), and building restorations. At the same time, commercial signage controls were implemented in the city centre, and old signs were replaced by new ones designed to reinforce the historic character and the aesthetic composition of buildings. At the end of this period, the visual quality and historic character of many streets in the city centre of Sao Luis was already recovered. The aim of the fourth stage (1990–1994) was to extend the Plan to other areas of the city; the main objective was to implement guidelines to reinforce the character of the city as a whole. The last and continuous stage has begun in 1995, and has been characterized by the implementation of marketing and urban tourism strategies. A proposal has been designed and applied to promote Sao Luiz as a national and international tourist destination. This latest stage has been supported economically by the Inter American Bank of Development (BID).

In December 1997, the city of Sao Luis was included in the List of Cultural Heritage by UNESCO, and the local and regional authorities believe that this was a result of the implementation of the 'Reviver Project'. This Plan has recovered the historic character of the city helping to promote its historic importance, and 'sell' the image of Sao Luis as a preserved and beautiful historic setting (see Figure 3.17). The results from the implementation of this Plan demonstrate that a successful approach to restore the historic character of a city involves different key actors which work together, and the adoption of marketing the city and urban tourism strategies to improve and promote the image of the city.

(iv) Program of Recuperation of Salvador, Brazil

Salvador is a city in the northeast coast of Brazil, and it is the capital of the Federal State of Bahia. This city has 2,676,606 inhabitants (Censo, 2010) and was built on two levels, with administration buildings and residences constructed on the hills, and forts, docks and warehouses on the beaches. Today the city is still divided into upper and lower city zones. The period of 1500 to 1815 was a golden age for



Figure 3.17 City Centre of São Luiz in the Federal State of Maranhão in Brazil (Source: Vera Rotta)

Salvador; homes and churches resplendent in gold decoration were built. Many of the city baroque churches, private homes, squares and even the hand-chipped paving bricks have been preserved as part of the historic heritage of Brazil. The historic city centre of Salvador was made a UNESCO World Heritage Site in 1997.

In 1991, a Master Plan call 'Program of Recuperation of the City Centre of Salvador' was designed and implemented to clean up and restore the historic core of the city known as 'Pelourinho'. This area is in the oldest part of the upper city, and is characterized by colonial architecture, cobble-stoned streets, art, and culture. The process of degradation of its public spaces and negligence of maintenance of its historic buildings began in the twentieth century. In the 1960s, this area was marred by crime and anti-social behaviour; it comprised decayed buildings occupied by an economically deprived population and prostitution activities, and public spaces were characterized by the lack of social and economic vitality (Braga and Santos Júnior, 2009).

Similar to the 'Reviver Project' applied in São Luis, the Master Plan in Salvador attempted to restore the historic city centre and control the commercial signage before these media begin to harm the visual character of buildings and places. This Plan was applied to an area of 228,637.81 square metres with 2,253 historic buildings to recover degraded public areas, historic monuments, and buildings with cultural and historic value. Guidelines to control commercial signs were designed to reinforce the historic character of the city centre, and promote



Figure 3.18 The historic core of Salvador known as 'Pelourinho Square' in Brazil has its character preserved due to commercial signage controls and design review guidelines to building facades (Source: Gabriela Fantinel Ferreira)

it as a commercial centre as well. Shopfronts and advertisements were taken into account as elements that, when well designed, increase the visual quality of commercial streets and stimulate social and economic vitality. This Plan also adopted marketing the city and urban tourism strategies to promote the historic importance of the city, and attract visitors and investors.

The implementation of the Plan in Salvador can be divided into two main stages. The first one (1992–1995) was related to the restoration of approximately 330 historic buildings. The second period, which began in 1995 and is still going on, has sought financial support from private companies and international banks. This stage has involved the design and implementation of projects of restoration of more than 300 historic buildings, public spaces, and monuments. Four groups have been working together in this stage: the Institute of Artistic and Cultural Heritage of Bahia, the Company of Development of the Metropolitan Region of Salvador, and the City Council of Salvador. In addition, as identified in the other Plans presented earlier, the support of local communities is one key factor for the successful implementation of this Master Plan in Salvador. The approach adopted in this city emphasizes that the preservation of historic buildings and places

stimulates social and economic activities, increasing retail profits, tourist industry, and private and public investments (see Figure 3.18).

Conclusion

The factors involved in the implementation of the Master Plans described in the previous sections have been taken into account to analyse in later chapters commercial signage control approaches adopted in historic cities of different urban contexts.

In addition, this chapter helped to define the main issues taken into account in the theoretical and conceptual framework of the empirical investigation presented in this book, as summarized below:

1. Commercial signs can harm the historic character of city centres even when these media are ordered. If the design of shopfronts, advertisements and windows displays does not relate to the historic character of these areas, these media affect user perception and evaluation of public spaces.
2. Convert the visual character of cities into a consumer product can harm the history and local essence of places. According to the theoretical discussion presented in this chapter, commercial signage controls can be used to reinforce the local character and improve social and economic vitality of historic cities without overlooking the local history of any particular community.
3. Commercial signs are recognized as vital elements of the contemporary life style and commercial signage approaches which aim to create manufactured built environments like Celebration in the United States are negative examples of urban design and urban planning. The focus of this book is to inform how commercial signage controls can be used as a tool to reinforce the historic character and, at the same time, promote the commercial appeal of city centres.
4. Public participation in the development of commercial signage controls, local community interests and resident perception and evaluation of historic city centres and commercial streetscapes are fundamental to analyse which issues need to be considered in the development of a general commercial signage approach.
5. The main difference between the commercial signage control systems adopted in England and Brazil has been identified at the national or federal level: in England, there is a national approach that helps local authorities to guide and control commercial signs in historic city centres, while, in Brazil, there is no national approach to controlling commercial signs leaving local authorities with the responsibility to develop commercial signage controls, and to decide whether these controls are necessary in historic cities. Because of the lack of a national approach, if city council

officers in Brazil decide to apply commercial signage controls, they need to design specific strategies for their individual cases without the help of any general guidance. The result is that disconnected and conflicting commercial signage approaches are currently applied in Brazilian historic cities with similar urban contexts. In this regard, a general commercial signage approach designed for historic city centres of different urban contexts can help regional and local authorities of countries like Brazil to develop commercial signage controls. This general commercial signage approach can also be applied as a theoretical base in the development of a national approach to the whole country. The analysis of (i) current commercial signage approaches adopted in different cities, and (ii) user perception and evaluation of historic city centres can contribute to identify the factors that need to be taken into account in this general approach.

6. The analysis of current commercial signage controls adopted in English historic cities suggested that the following main issues can be taken into account to analyse how the operation of commercial signage controls is carried out in different urban contexts:

- (i) In historic cities where commercial signage is ordered and the historic heritage is preserved, commercial signage controls are usually designed to preserve the historic character of places, avoid visual pollution, and stimulate social and economic vitality.
- (ii) Support of local communities and civic societies in the process of implementation of commercial signage controls is one of the most important factors that make effective the national commercial signage approach adopted in England.
- (iii) The review of commercial signage approaches adopted in Leeds, Dartmouth, Exeter, Bath, Oxford and York through the analysis of local legislation demonstrated that documentation review and interviews with city council officers can help to understand how the operation of commercial signage controls is carried out in different urban contexts.

Table 3.2 summarizes other issues taken into account by the local authorities of those English historic cities.

Reviewing the initiatives adopted in Brazil to control commercial signs, the following preliminary issues can also be considered to analyse the operation of commercial signage controls adopted in historic cities of different urban contexts:

- (i) In historic city centres where visual quality has been improved, commercial signage control approaches are designed and implemented to increase visual quality and social and economic vitality of central areas harmed by visual pollution. The following strategies are considered to reduce visual pollution in Brazil: commercial signage controls; technical support from local authorities to owners of historic buildings who agree to restore and preserve their properties; definition of land uses that can be encouraged in city centres; and elaboration

Table 3.2 Summary of the commercial signage controls adopted in Leeds, Dartmouth, Exeter, Bath, Oxford, and York, in England

Cities	General aim of the commercial signage controls	Main physical features of commercial signs that are controlled
GENERAL ANALYSIS	LEEDS	Shopfronts and advertisements are controlled to avoid visual overload and promote social and economic vitality. The controls contribute to preserving the character of the place and making this a tourist destination.
	DARTMOUTH	Guidelines to control commercial signs have been adopted in all area to preserve the character and visual quality of the town. These regulations aim to promote commercial vitality, attract visitors, satisfy resident needs, and reinforce the local character of the place.
	EXETER	Commercial signs are designed to respect the aesthetic composition of remaining historic buildings, reinforce the last historic character of Exeter city centre, and increase social and economic vitality.

Table 3.2 *continued...*

Cities	General aim of the commercial signage controls	Main physical features of commercial signs that are controlled
SPECIFIC ANALYSIS IN THREE CASE STUDIES	BATH	The local authority controls aesthetic variation of commercial signs, building facades and public spaces. It emphasises that design, scale and proportion of shopfronts and advertisements should be related to building facades for which they are intended, and those adjacent as well.
	OXFORD	The local authority defines that new shopfronts and fascias are just permitted in the city centre if their design and material respect the style, proportion and character of existing buildings and enhance the streetscape. Commercial signage can be displayed if (i) it suits its visual setting in terms of scale, design, appearance and materials, (ii) preserves or enhances the visual amenity of building facades, and (iii) does not prejudice highway safety or residential amenity.
	YORK	The local authority accepts that, in some cases, modern shopfronts may be appropriate, and they can contribute to the character and appearance of conservation areas. However, all signage should respect the scale, proportion, materials and architectural style of building facades to which these are attached, and the area in which it is located.

of chromatic palettes to orient owners to choose an appropriate colour for their building facades.

(ii) In aesthetic control approaches mainly addressed to the preservation and restoration of abandoned and neglected historic buildings and public spaces, guidelines to control commercial signs are recognized as tools to reinforce the historic character of city centres.

(iii) The control of the following physical characteristics of commercial signs are identified as strategies to reduce visual pollution in Brazilian historic city centres: position (perpendicular or horizontal) and location (coronation, body or base) in relation to facade, dimension, material, colour, distance between bottom of sign and pavement, and lettering style.

(iv) Fiscal incentives given to shop owners who do not harm the historic character of their properties can be one way to make this user group support commercial signage controls.

(v) Participation and support of different departments of the local authority and key actors (such as architects, planners, technicians, photographers, writers, poets, philosophers and thinkers interested in popular music) in the process of development and implementation of commercial signage controls are essential to guarantee the successful adoption of commercial signage regulations. In workshops, residents and representatives of civic societies can help to define the best alternatives to preserve the character of historic centres and combat visual pollution.

(vi) Marketing the city and urban tourism strategies are recognized as tools to promote the positive effects that commercial signage controls can have on the appearance of city centres, and get the support of local communities and civic societies. These strategies can help to inform local communities of the cultural, social and economic potential of historic city centres where visual quality has been improved through implementation of commercial signage controls.

The next chapter presents the methodology applied in the empirical investigation.

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PART II

The Empirical Investigation: The Effects of Commercial Signage on People's Quality of Life



Figure II.1 City of Oxford in England. Commercial signage is designed to respect historic heritage (Source: author)

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Chapter 4

Empirical Investigation – England and Brazil

This chapter is built to guide professionals, post-graduate students and academics in the fields of Architecture, Planning, Urban Design and Environmental Psychology in identifying the most appropriated methods of data collection and analysis to study user perception and evaluation of historic and commercial streetscapes. The chapter is structured into two main sections: (i) sample criteria, and (ii) methodology of investigation. But first, the questions that this book aims to answer are presented, and, at the end, issues related to the fieldwork are discussed, and a summary is presented.

What is Investigated Here?

Different approaches to the control of commercial signs have been carried out in several historic city centres. These approaches are usually isolated initiatives, which are not based on a general theory related to user perception and evaluation of commercial streetscapes. At the same time, in many historic centres, no commercial signage controls are applied to avoid visual pollution. As suggested by the Brazilian authors Issao Minami (2001) and João Carlos Cauduro (1981), this is one of the main reasons for the decreasing level of user satisfaction with the appearance of commercial streetscapes. Historic city centres are places where people from different parts of the world visit and often live and work, this study assumes that a commercial signage approach should be based on the physical characteristics of commercial and historic streetscapes that increase the satisfaction of users from different urban contexts. Therefore, the problem investigated here concerns the lack of a general approach to guide and control commercial signs in historic city centres based on the perception and evaluation of users from different urban contexts. In light of this issue, the questions investigated are as follows:

- a. (i) Which aspects of the operation of commercial signage controls need to be taken into account in the development of a general commercial signage approach applied to historic city centres of different urban contexts?
- b. (ii) Which physical characteristics of commercial signs and buildings need to be taken into account in the development of a general commercial signage approach applied to historic city centres of different urban contexts?
- c. (iii) Are there common perceptions and evaluations between users from different urban contexts in terms of commercial signage controls and the appearance of commercial streetscapes in historic city centres?

The following general assumption is also investigated: While some visual preferences in the built environment may be influenced by the user's urban context, others (universals) may be common to the majority of people from different countries and may be useful in defining general principles that guide preference and satisfaction.

How to Define Criteria to Select Samples

The logic of sampling is central to studies of user perception and evaluation; the limits to generalization, sample size, and sampling techniques are considered in this book when selecting case studies, commercial streets, and participants. Three general criteria are used to select the sample: (i) it has to be possible to compare user responses related to historic city centres of different urban contexts, (ii) it is necessary to obtain information of a comparable nature, and determine the minimum number of participants in each case study, to be able to compare responses in a reasonably precise way, and (iii) it is necessary to set limits for the maximum number of case studies, commercial streets, and participants that can be sampled because of financial and time constraints issues.

Selection of Case Studies

A general distinction is often made in scientific research between 'probability sampling' and 'nonprobability sampling'. There are two variants of the former: random samples, and stratified samples. In both cases, the probability for the inclusion of any given place is known, increasing representativeness of the sample. The 'nonprobability sampling' is divided into three general types: quota sample, purposive sample, and opportunity sample. In all of them, the likelihood of selection is not actually known, being usually applied for particular research purposes (Coolican, 2004, Sommer and Sommer, 2002). For the delimitation of the countries analysed in this book, the 'probability sampling' has been adopted in order to produce the most representative sample (most like the population from which the sample is drawn). A stratified sample was selected on the basis of three general criteria mentioned above, and of the following two main stratification factors:

- a. (i) A country where a national approach designed to help local authorities to guide and control commercial signage in historic city centres is applied in practice.
- b. (ii) A country where there is no national approach to guide and control commercial signage leaving local authorities with the total responsibility for developing commercial signage controls, and to decide whether these are necessary in historic city centres.

The choice for the sample of countries was also based on the author's previous knowledge of commercial signage approaches applied in countries in South America (Portella, 2003, 2007) and in the fact that England, where the study was based, is an example where a national commercial signage approach is applied to help local authorities to guide and control commercial signage in historic city centres. These facts contributed to the selection of the following countries: England and Brazil. With regard to Brazil, this investigation concentrated the analysis in the southern most Federal State, Rio Grande do Sul, since part of the theoretical background of this book is based on the findings produced by an earlier study (Portella, 2003), which focused on the visual impact of commercial signs in historic cities in the south of Brazil. The territorial dimension of this country (approximately 8,514,215 km² or 3,287,357 sq mi) was also taken into account in the selection of only one State; the concentration of this investigation in one Brazilian Federal State avoided data collection becoming exhausting and impractical in terms of financial resources and time spent travelling.

Having chosen the countries, historic city centres were selected as case studies because (i) in these places there are competitive pressures between commercial interests, linked with strategies of marketing the city and urban tourism, and preservation of historic heritage, and (ii) this book attempts to explore the influence of those pressures on the approaches adopted by local authorities to control commercial signs in these areas. A diagnostic exploration was conducted in terms of the size of population in the thirty five major historic cities and towns in England, according to English Heritage (English Heritage, 2013), and (ii) in the main cities, colonies and villages, which marked the history of colonization and urbanization of the southernmost Federal State of Brazil (Daros and Barroso, 1995, Barroso in Weimer, 1992). This analysis demonstrated that the majority of these places, in England and in the State of Rio Grande do Sul, can be classified as small or medium sized (population \leq 400.000 inhabitants). Therefore, this became the first main criterion in the selection of the case studies: small or medium cities, towns, colonies or villages were considered as potential case studies. In sequence, three analyses were carried out to select the most representative case studies: (i) photographic analysis of commercial streets of historic city centres in England and Brazil, (ii) fieldtrips to historic cities in England and in the Brazilian Federal State of Rio Grande do Sul, and (iii) analysis of legislation related to commercial signage controls in English and Brazilian historic cities. These explorative analyses did allow the identification of common features across commercial streetscapes in different settings.

The results show that in England there is one common scenario that represents the majority of historic city centres: commercial signage controls are currently applied in order to preserve the historic character of these places so that the streetscape is ordered and characterized by preserved historic buildings. In Brazil, two typical cases illustrate the majority of historic city centres: (i) commercial signage controls are designed and applied by the local authority in order to reinforce a manufactured image of the place, resulting in an ordered streetscape characterized by contemporary buildings, and (ii) commercial signage controls

are not applied, resulting in a disordered streetscape characterized by historic buildings harmed by shopfronts and window displays. These last two scenarios were used as criteria in the selection of two case studies in Brazil.

The following historic cities were selected as case studies because they conform to all of the criteria above: Oxford, in the county of Oxfordshire in England, and Gramado and Pelotas in Brazil. In Oxford, commercial signage controls have been designed and applied to preserve the historic heritage of the city. In Gramado, commercial signage controls have been designed and applied to reinforce a manufactured image of the city promoted by the local authority as 'The Brazilian Switzerland'. In Pelotas, commercial signage controls have not been applied. In this last case study, the author had already carried out a primary analysis of the effects of shopfronts and window displays on the historic core (Portella, 2003); this earlier study demonstrated that the disorder caused by commercial signs is recognized by residents as one of the main reasons for the deterioration of the historic heritage of this city. The study area in each of these case studies was delimited according to the following criteria: it needs to be in the city centre, in the historic core, and in zones of intense commercial activity.

Selection of Commercial Street Facades

To analyse user perception and evaluation of commercial streetscapes with regard to the relationship between the aesthetic composition of commercial signs and buildings, a probability sampling has been applied to select a set of street facades in each case study. The following factors were adopted in their selection:

- a. (i) The street facade should reflect the general characteristics of the study area in terms of the relationship between commercial signs and buildings.
- b. (ii) The street facade should be formed by ordinary buildings and either lawfully recognized historic buildings or, in the Brazilian context, exemplars from the first period of the city which are not currently recognized by law.
- c. (iii) The street facade should have historic buildings with commercial signs displayed on their facades.
- d. (iv) The street facade should have 80% or more of the buildings related to commercial activities. This is because this study analyses the relationship between commercial signs and buildings, and street facades where commercial activities are predominant and this relationship is conspicuous are preferred.
- e. (v) The street facade should not have empty plots (delimited or not by walls in the Brazilian context), buildings in the process of construction or buildings in the process of restoration or renovation. As suggested by Portella (2003), these variables can affect user perception and evaluation of streetscapes.
- f. (vi) The width of the street needs to be 3 metres or more in order to allow photographs to be taken. A previous study suggested that road widths of

less than 3 metres makes it difficult to apply the method adopted here to produce the media representation of street facades (Portella, 2003).

g. (vii) The street facade should not have buildings with more than five floors. High buildings tend to be difficult to photograph, and usually, when photos can be taken, the level of parallax distortion is extremely high.

In addition, to analyse the influence of different physical characteristics of commercial signs and buildings on user perception and evaluation, the commercial street facades in the sample should vary in terms of (i) number of commercial signs and percentage of street facades covered by these media, (ii) square metres of commercial signs per linear street metre, (iii) number of buildings harmed by commercial signs according to the literature review, (iv) order and level of complexity in terms of the relationship between commercial signs and buildings, (v) visual character, and (vi) colour. Using all these criteria, two commercial street facades were selected in each case study (see Appendix B and C).

Selection of Participants

The non-probability sampling principle has been adopted to select participants. The criteria adopted are presented below with regard to each method of data collection, whose are discussed later in more detail.

A purposive sample was selected to the interviews. The interviews were designed to investigate how the operation of commercial signage controls is carried out in each case study. The selection of interviewees was made on the basis of those who are most representative of the issues to be investigated, and who are likely to have more expertise in these matters. The head of the City Council department responsible for the design and application of commercial signage controls in each case study was contacted by the author. An invitation letter was sent to them by e-mail and by post (addresses obtained from City Council websites). This letter explained the purpose of the survey inviting them to participate in an interview. Replies from the City Council Officers in all case studies were received; appointments were arranged and the interviews were carried out. As a consequence of this kind of selection, the sample size in each case study varied: two officers in Oxford (the main planning officer and the tourist officer), two officers in Gramado (the main planning officer and the environmental officer assistant), and four officers in Pelotas (the main planning officer, the City Council lawyer, and two officers of the planning department).

An opportunity sample was selected to the questionnaires. A volunteer sample, composed of people who are willing to participate in the survey, is an opportunity sample, and the characteristics and behaviour of volunteers may be quite different from those of non-volunteers. However, as the nature of this investigation assumes that people cannot be forced to be part of any survey, users decide whether they would like to answer the questionnaire or not. Respondents volunteered to answer two types of questionnaire: type A, designed to be answered on-site, and type B,

designed to be answered off-site. The only prerequisites to be part of this sample were: to be resident in the case study location surveyed, 18 years old or more, and a volunteer for just one type of questionnaire. This last criterion was necessary to avoid user perception and evaluation of commercial street facades observed on-site influencing user perception and evaluation of the same street facades observed through colour images.

The following techniques were used to search for volunteers: posters were displayed in universities, cafes, public places and City Council halls, and given to pedestrians as pamphlets. These media explained the purposes of questionnaires, and invited people to participate. Invitation letters were also sent by post to professionals and lay people selected randomly from phone lists. In addition, a snowball approach was adopted: volunteers were allowed to invite friends to participate. As a result of these techniques, several people contacted the author by e-mail or phone (contact information was included on posters, invitation letters and cover pages of questionnaires, which most volunteers kept) and asked to take part in the study. Articles in local newspapers were also published in order to encourage people to become involved in the survey.

In relation to questionnaires answered on-site, a small sample of 11 volunteers was considered enough due to the purpose of this method. In relation to questionnaires answered off-site, a minimum number of individuals was defined in order to guarantee the validity of statistical data analysis; at least 30 lay people and 30 professionals (architects, planners, urban designers or civil engineers) must answer the questionnaire. As a result of a self-selection process, the sample sizes in the three case studies were different: 114 respondents in Oxford (63 professionals and 51 lay people), 120 respondents in Gramado (41 professionals and 79 lay people), and 127 respondents in Pelotas (51 professionals and 76 lay people).

A purposive and opportunity sample was selected to the focus group because the main objective of this discussion was to explore what a specific set of people (City Council officers, professionals and lay people) think and feel about the impacts of commercial signs in one of the historic city centres analysed. The focus group was conducted in the case study where the commercial street facades chosen as the worst streets in terms of appearance by the majority of respondents are located. The purposive sampling criterion was applied to select City Council officers: the same individuals who participated in the interview were invited to join the focus group. The owners of shops located in the commercial streets chosen as the worst streets in terms of appearance were also invited; however, they did not show any interest in participating. This issue is discussed later.

At the same time, the opportunity sampling criterion was adopted to select professionals and lay people. The techniques applied to get volunteers were: posters displayed in universities, cafes, public places and in the City Council hall, and given to pedestrians as pamphlets, and an article published in a local newspaper inviting people to play a part in the discussion. The poster and the article advertised the objectives of the focus group underlying the following question as a starting point to the discussion: 'What do you think about the appearance of the

Table 4.1 Total sample of participants in the empirical investigation

Method		Oxford Case Study	Gramado Case Study	Pelotas Case Study
Interviews		2	2	4
Questionnaires	On-site	11	11	11
	Off-site	114	120	127
Focus group		NA	NA	22
Sub-Total		126	131	160
TOTAL		417 volunteers		

Note: NA: Non Applicable

commercial signs displayed in the historic and commercial city centre?’ As a result of this process, the sample was formed by all City Council officers invited by the researcher and eighteen more volunteers.

Table 4.1 sums up the total numbers of individuals that participated in this survey.

Techniques to select Participants in Different Countries and Cultures

In England, two techniques proved to be very successful to persuade people to answer the questionnaires: (i) display of posters in universities, cafes, public spaces, and so on, explaining the purpose of the survey and inviting people to participate, and (ii) invitation letters sent by e-mail and post. After three weeks, in Oxford, 114 volunteers contacted the researcher to answer the questionnaires. On the other hand, in Brazil, both strategies were ineffective and, during a two week period, the researcher did not receive any replies from potential respondents. In order to persuade people from Gramado and Pelotas to take part in the survey, articles were published in local newspapers, which introduced the study to the community and invited people to answer the questionnaires. After that, in a two week period, the researcher received 120 replies from volunteers in Gramado, and 127 replies from volunteers in Pelotas. This difference between the two countries can be related to users’ culture, social behaviour and safety issues. Many people in Brazil feel unsafe in answering posters and invitation letters sent by unknown people. When the official media, as a TV program or newspaper, introduce a person to the community, this feeling is left out and people feel safe to contact the researcher.

Qualitative or Quantitative Research?

According to Ralph Rosnow and Robert Rosenthal (2012), the scientific method is a strategy that embraces different approaches, which involve methods and

techniques of data collection and analysis that can be quantitative or qualitative. In general, a quantitative approach concerns methods that deal with numbers and anything measurable; it searches to generate quantifiable data on a relatively large number of people who are representative of a wider population. Research mainly based on the quantitative approach is often conceptualized as having a logical structure in which theories determine the problems which researchers address in the form of hypotheses. On the other hand, a qualitative approach involves methods that investigate user perceptions, evaluations, behaviours and experiences from individuals' points of view. This approach attempts to study the social world in order to describe and analyse culture and behaviour of humans and their groups taking the opinion of those being studied. Qualitative methods use logical inferences to obtain and decipher gathered data dealing with the human element (Bryman, 2004).

The choice of quantitative or qualitative methods depends on the aims of each study. The purely quantitative position argues that only by using quantitative methods can social sciences become truly scientific. Accurate observation and data analysis are fundamentals to develop 'laws' that account for all relationships between variables. On the other hand, the purely qualitative position argues that quantitative methods tend to obscure the reality of the social phenomena under study because they underestimate or neglect the non-measurable factors, which may be the most important (Coolican, 2009). Although radical views like these still exist in the scientific community, the use of both approaches to complement each other has become popular. Many studies in the area of Environment and Behaviour have been carried out focus group discussions (qualitative method) and questionnaires (quantitative method) to analyse the same issues, and the overall tenor of the results of the combined use of these two methods is usually mutually reinforcing.

The methodology adopted in this book combines quantitative and qualitative methods of data collection and analysis. The methodological design is built on the basis that the choices for the methods are determined by the questions of the study (Smith, Harre and Langenhove, 1995). In this investigation, quantitative methods have been used with a global qualitative frame, and qualitative methods have been adopted to understand the meanings of the numbers produced by the quantitative methods. The idea is that the quantitative methods can give precise and testable expression to the qualitative ideas (Sommer and Sommer, 2002).

The investigation presented in later chapters is based on a multiple method survey design. This approach was chosen because there is no ideal method and technique in the behavioural sciences. The intention here is not to find the single best method, but to identify an adequate combination of methods and techniques of gathering the data. Studies that apply just a single type of method leave untested rival hypotheses that call into question the validity of the study findings; each method, considered alone, is imperfect in some respect. Consequently, a diversity of imperfection allows the researcher to combine methods not only to gain their individual strengths, but also to compensate for their particular faults and limitations. For instance, a questionnaire, which can be given to many people

quickly, can be supplemented by interviews and a focus group with few people to probe more deeply into significant issues (Silverman, 2005, Sommer and Sommer, 2002, Brewer and Hunter, 1989).

According to John Brewer and Albert Hunter (1989, p.17), the fundamental strategy of a multiple method survey design is: 'to attack a research problem with an arsenal of methods that have no overlapping weaknesses in addition to their complementary strengths'. The diversity of methods adopted provides opportunities for cross-validating and cross-fertilizing of the study procedures and findings. Each new set of data increases the confidence that the results reflect reality rather than methodological error (Sommer and Sommer, 2002).

Methods of Data Collection

Five methods of data collection were selected to develop the empirical investigation in this book: (i) documentation review and archival record, (ii) systematic observation of physical characteristics of commercial street facades on-site and through photographs, (iii) questionnaires, (iv) interviews, and (v) focus group. The reasons for the choice for these sources of evidences, their design, and application are discussed in the following sections. Apart from these methods, the discussions presented in the last chapters were taken into account to support the design of the methods and the interpretation of the data. The review of current commercial signage approaches adopted in different urban contexts, for example, allowed a general understanding of the main issues involved in the operation of commercial signage controls in English and Brazilian historic city centres.

Documentation Review and Archival Records

According to the well-known publication of Robert Yin (2003), 'Case Study Research: Design and Methods', the most important use of documents and archival records is to corroborate and augment evidence from other sources. In this book, legislation and guidelines related to commercial signage controls applied in each case study were collected and analysed. This analysis assists in understanding how local authorities approach the control of shopfronts and window displays in the historic city centres of Oxford, Gramado, and Pelotas. The following issues were considered in the documentation review and archival records: (i) presence of commercial signage controls and the form they take, (ii) aims of these controls, (iii) groups responsible for the development of commercial signage controls, (iv) efficiency of these controls to manage commercial signs, (v) professionals consulted during the development of commercial signage controls, (vi) public participation in the development of these controls, (vii) enforcement of these controls by the local authority, (viii) influence of these controls on the appearance of the city centre, (ix) installation of new commercial signs in the city centre, (x) relationship between the aims of commercial signage controls and

the image promoted of the city by the local authority, and (xi) development of new commercial signage controls.

Archival records were analysed in conjunction with the documentation review in order to contextualize the case studies. Different types of evidence were collected: (i) maps and aero-photographs of England and Brazil, Oxfordshire County and Rio Grande do Sul State, and of the cities of Oxford, Gramado and Pelotas, (ii) geographic localization, total population, territorial extension, demographic density, population, immigrants, and general economic activities of Oxfordshire County and Rio Grande do Sul State and the cities of Oxford, Gramado and Pelotas, and (iii) general information about the local character, historic foundation, and physical characteristics of the commercial streetscapes in these cities. In addition, old photographs and postcards obtained from newspapers and senior residents, showing commercial streets in each case study, and actual photographs of the same streets were studied. These media were compared in order to identify how commercial streets appeared in the past and in the present in terms of the relationship between commercial signs and building form.

Systematic Observations of Commercial Streetscapes

By making field visits to the case study, systematic observations of commercial streetscapes were carried out in early stages. The purpose of these observations was to identify: the level of order among commercial signs and buildings, the relationship between the aesthetic composition of these media and building facades, and the general visual character of the commercial streets. These observations helped to understand the phenomenon being studied in each urban context (England and Brazil).

The next stage identified the physical characteristics of the commercial streets in the sample. This analysis focused on two issues: identification of which street facades are either more or less ordered in terms of the relationship between commercial signs and buildings, and calculation of the level of complexity of these streets in terms of variation of commercial signs and buildings. With regard to the first issue, the following factors were analysed: number of buildings, number of commercial signs (shopfronts and window displays), percentage of street facade covered by these media, number of buildings harmed by commercial signs according to the literature review and their level of damage, percentage of street facade related to ordinary buildings harmed by commercial signs, percentage of historic buildings harmed by commercial signs and their level of damage, and square metres of commercial signs per linear street metre (see Appendix B).

The following criterion was applied to identify the street facades which are either more or less ordered: the percentage of street facade related to buildings harmed by commercial signs defines which streets are either more or less ordered. For example, street 3, with 4% of its street facade related to buildings harmed by commercial signs, is classified as more ordered than street 5, with 56% of its street facade related to buildings harmed by commercial signs. According to this

criterion, the sample of street facades is classified in the following order: street 1 (most ordered), 2, 3, 4, 6, and 5 (least ordered tending to disorder). This initial classification will be compared with the user perception and evaluation of these streets in the reporting of the results. As has already been discussed in Chapter 1, order is a prerequisite to complexity. Consequently, the term ‘complexity’ is not applied to streets 5 and 6 because, from this initial classification, they tend to disorder. These streets were identified as having just higher or lower variation of commercial signs and buildings.

The method adopted to calculate the level of complexity in commercial street facades was developed and tested in 2003 by the author; it is called ‘Complexity Method’. This method is applied to analyse the effects of high and low complexity on user perception and evaluation of commercial streetscapes. According to an earlier investigation (Portella, 2003), the level of commercial signage and building variation resulting from the application of this method corresponds with the level of commercial signage and building variation perceived by users on-site. This method is applied to determine the levels of complexity of commercial street facades by analysing the variation of a range of physical features of commercial signs and buildings (see Table 4.2). The application of this method consists of numbering the street facades in the sample according to the level of variation of physical characteristics of commercial signs and buildings, where the higher the variation, the lower the number allocated to each street. For example, in the empirical investigation in this book, when analysing the variation in the size of commercial signs, the street facade with the highest variation was numbered one and the street facade with the lowest variation was numbered six. After all of the physical features had been analysed, the numbers allocated to each street for every single feature were summed to provide a total figure indicating the final level of complexity of each street. The street with the lowest final sum was classified as having the highest complexity, while the street with the highest final sum was classified as having the lowest complexity. The application of this method is described in Appendix D. Table 4.3 shows the final level of complexity of each street facade in the sample, as a result of this method.

Questionnaires

Questionnaires are widely known in the Environment Behavioural research field as an effective method in the systematic gathering of information about people’s perceptions, attitudes, values, and behaviour (Rosnow and Rosenthal, 2012, Coolican, 2009, Sommer and Sommer, 2002, Goodrich, 1980). This method can be effectively administered to large samples, and it is relatively economical and ensures respondent anonymity. Two types of questionnaires were carried out in the empirical investigation of this book. Questionnaire type A (Sample A) analysed user evaluation of the appearance of commercial street facades on-site. It was applied to confirm whether the media representation chosen to represent commercial streets serves as an adequate substitute to analyse user evaluation of

Table 4.2 Physical features of commercial signs and buildings analysed in the ‘Complexity Method’

Physical features of commercial signs		Size; shape; number of chromatic groups; chromatic contrast between letters and sign background; proportion; arrangement on facades; type of sign; location on facade; presence of images; letter style; predominant letter style; size of letters in relation to sign background; size of images in relation to sign background; letter size (height).
Physical features of buildings	Silhouettes	Symmetry of shape perimeter (street as a whole); number of vertexes; number of turns in shape perimeter (street as a whole); symmetry of building perimeter; height of buildings; width of buildings; type of coronation.
	Facade details	Type of details; number of buildings with details; architectural styles; texture of revetments.
	Articulation	Size of facades; fenestration; percentage of street facade fenestration; shape of windows and doors; overall proportion of windows and doors; number of building with broken mass; percentage of street facade cover by buildings with broken mass; proportion of buildings; presence of horizontal and vertical partition on building facades; presence of vertical features on building facades; thickness of vertical features on building facades; localization of buildings on plots; presence of vegetation.
	Visual character	Architectural styles; number of storeys; roof line; building symmetry.
	Colour variation	Colour of building facades; colour of body facades.

streetscapes on-site. User evaluation of commercial street facades observed on-site (sample A) and user evaluation of the same commercial street facades observed through colour photomontages (sample B) were compared. Questionnaire type B (Sample B) analysed user evaluation of (i) necessity of commercial signage controls, (ii) public participation in the development of these controls, (iii) physical aspects of streetscape that need to be taken into account in these controls, (iv) appearance of historic city centres, (v) city centre functions, (vi) city centre images, (vii) wayfinding through commercial signage, (viii) appearance of commercial street facades, (ix) physical characteristics of these streets that influence user evaluation, (x) beauty, interest, order, colour and complexity of commercial street facades, (xi) variation of commercial signs and buildings, (xii) number of commercial signs and percentage of building facade cover by these media, and (xiii) relationship between the aesthetic composition of commercial signs and building facades. Both questionnaires were designed using standardized formats to discover whether there are regularities between responses of residents from the different case studies by comparing their answers to the same set of questions.

Table 4.3 Final level of complexity as a result of the ‘Complexity Method’

Commercial street facades	Variation of physical features related to:						Final level of complexity (sum of the numeric classifications of each street facade).	
	Commercial signs	Building facades						
		Silhouette	Details	Articulation	Visual character	Colour variation		
Street 4	38	10	15	37	9	5	114	<i>Highest variation</i>
Street 1	43	22	6	35	11	5	122	
Street 3	44	23	12	29	12	5	125	
Street 6	39	25	20	35	15	8	142	
Street 2	48	28	9	41	16	12	154	
Street 5	49	29	16	45	18	7	164	<i>Lowest variation</i>

Notes to table: The application of this method is described in Appendix D. The term complexity is not applied to streets 5 and 6 because they are tending to disorder. These streets are classified just as having higher or lower variation.

Questionnaires were designed to be as simple, precise, specific, and short as possible, to avoid respondents getting bored, confused or tired. Questionnaire type A comprised 22 questions, four open-ended and 18 multiple-choice, and questionnaire type B comprised 35 questions, four open-ended and 31 multiple-choice (see Appendix E). As suggested by Robert Sommer and Barbara Sommer (2002), a combination of open-ended and multiple-choice questions is better than relying on a single sort. The advantages of open-ended questions are: they deliver richer information; respondents are not frustrated by the imposed constraint of a fixed-choice answer; there is less chance of ambiguity; and the questionnaire becomes more realistic in terms of what users perceive as most positive and negative in the built environment. Open-ended questions were included in the questionnaires because this study did not know all the possible answers to the questions, wanted to avoid suggesting answers to the respondents, and wanted answers in the respondents' own words. With regard to this last reason, the purpose was to identify any positive or negative physical characteristics of commercial signs and buildings that stand out in a person's mind when commercial streetscapes are first observed.

Multiple-choice questions were included in the questionnaires for the following reasons: (i) there were a large number of respondents in each case study (33 respondents for questionnaire type A, and at least 90 respondents for questionnaire type B), (ii) the answers were designed to be scored by statistical methods, and (iii) the responses of different user groups (users from different case

studies, lay people, and professionals) needed to be compared. This controlled approach provides respondents with specific options for answers, such as 'yes' or 'no', or multiple-choice alternatives that make numerical comparison relatively easy. Two different levels of measurement were applied: nominal and ordinal. The first was adopted to inform categorical information, while the second was chosen to provide information about size and direction of people's answers.

To analyse intensity, direction and quality of the variables expressing user perception and evaluation, choices of answers were arranged in a ranking order representing different degrees or magnitude. Ordinal pre-coded questions were based on the Likert Attitude scale procedure, in which statements were presented for respondents to indicate the intensity of their agreement or disagreement (from 'strongly agree' to 'strongly disagree') on a five-point scale. The level of importance attributed by users to some variables (from 'very important' to 'not important'), and the level of sympathy of users with the appearance of commercial street facades in the sample (from 'I really like' to 'I really do not like') were also analysed using a five point scale.

Ranking scales were also adopted to identify which commercial street facades users like the most and like the least in terms of appearance. This scale was based on asking people to look at the commercial street facades in the sample, and report which ones they like the most in a decreasing order of preference. In addition, two affective scales (beautiful–ugly, boring–interesting), and six perceptual/cognitive scales (ordered–disordered, colourful–colourless, complex–simple, many–few, high–low, and much–small) were taken into account to analyse user perception and evaluation of historic city centres and commercial streets. A middle-response category, such as 'undecided', 'moderate', 'neither beautiful nor ugly', and 'I do not know', was also provided as an optional answer. This last category means a balance between positive and negative feelings on the issue under investigation, or a lack of interest or knowledge of the topic. This was adopted to avoid forcing a false appearance of opinion one way or the other, and to respect the respondent's right to be neutral on the issues. As this book analyses and compares the responses of professionals, lay users, and residents in Oxford, Gramado and Pelotas, data related to users' occupations and city of residence were recorded. Issues such as nationality, age, and gender were not taken into account in the analysis, but this information was recorded to draw a profile of the sample.

Both types of questionnaires were self-administered. However, because the sample of users who answered questionnaire type A was small (11 respondents in each case study), the researcher was able to accompany each participant on-site, answering queries and waiting for the questionnaire to be returned. In this case, appointments were arranged between the author and the volunteers, and they went on-site together. Generally, the respondents took no more than 30 minutes to complete this questionnaire, and the administration of the method took no more than four days to complete in each case study.

Questionnaire type B was delivered in person, and it was explained to the respondent what was expected to be done and made an appointment to collect it.

Usually questionnaires were collected on the following day. Clear instructions were presented in an introductory statement to avoid possible misinterpretation, as the respondents completed the questionnaire on their own. Participants could contact the researcher at any time if they had any doubts about how to answer or interpret the questions. Direct contact between the researcher and the participants was an important factor in committing them to complete the whole questionnaire. In addition, the sample criteria adopted to select users was a contributing factor to engage people: interest in participating in the survey came from the respondents who contacted the researcher. Therefore, this was interpreted as a sign that they were committed to completing the task.

In terms of the format of both questionnaires, as argued by Sommer and Sommer (2002), appeal to the eye is an important issue. The questionnaires were printed in colour format: photographs of the case studies, coloured borders and backgrounds were used in order to increase people's interest in answering the survey. In addition, the media representation of the commercial street facades attached to questionnaire type B was printed as a poster (84.10cm x 59.40cm) on photo paper, using the best quality of resolution. Consequently, the visual appeal of the questionnaires was evaluated positively by participants from England and Brazil.

(i) Pilot study

A pilot study was carried out to determine whether respondents understood the questions and were able to answer them. It aimed to reduce ambiguity, highlight pitfalls, and possible misinterpretation of the questions. As the questions presented in questionnaire type A were also part of questionnaire type B, a pilot study of questionnaire type B only was done. Two pilot studies were carried out: one in English and one in Brazilian Portuguese. The first was conducted with 13 volunteers from Oxford, while the second was applied to a group of eight Brazilians who live in this city. Due to financial resources available, the researcher went to Brazil only when all methods had been completely organized and finalized. Therefore, the selection of Brazilian Portuguese speakers in England was the best option to test the questionnaire in this language. The choice of two pilot studies was based on the fact that question wording is culturally sensitive (Sommer and Sommer, 2002): some expressions that mean one thing in English may mean something different in Portuguese. The purpose of both pilot studies was to identify whether the questions had the same meaning for English and Brazilian Portuguese speakers. The pilot studies were important since questionnaires were standardized for England and Brazil in order to allow comparison between users from these two different urban contexts in terms of their perception and evaluation of the built environment.

The limited time available determined the sample criterion adopted to select participants for the pilot studies: the snowball technique; respondents first contacted by the researcher recruited other participants from their acquaintances. This sample criterion proved to be effective for the pilot study, and there were no problems of misinterpretation of the questions when the final questionnaires (types A and B) were carried out in England and Brazil. Respondents from both

pilot studies (in English and in Portuguese) took about 45 minutes to complete the questionnaire, which was considered acceptable.

(ii) Colour Photomontages

Ideally, to ensure maximum realism, users from England and Brazil should observe the sample of commercial street facades on-site. However, because of the impracticality of bringing users from England to Brazil and vice versa, the experiment was based on colour photomontages attached to questionnaire type B.

Many researchers have been engaged in efforts to discover which, if any, media of representation serve as adequate substitutes for actual streetscapes. Many studies published by Jack Nasar (1998, 1994, 1989, 1988) and Arthur Stamps (2004, 2000, 1999a, 1999b, 1999c, 1998, 1997, 1993, 1990) have suggested ideas and sources, and report specific findings related to correlations of preference judgements between various simulation media. These investigations demonstrated that user perception and evaluation of streetscapes observed through slides, coloured photographs and computer simulations, such as photomontages, are very similar to user perception and evaluation of the same streetscapes observed on-site. Colour is always identified as a relevant requirement for a valid media representation: results obtained from colour photos have more validity than those obtained from black and white photos.

One common photomontage technique applied in previous studies of user evaluation of streetscapes comprises an image of a block elevation. It consists of a set of one point perspectives of individual buildings juxtaposed into a single image. However, a criticism of using this technique is that such views are almost impossible to obtain in reality because of the limitations of perspective and distance from which the entire block facade can be seen. A study conducted by Stamp and Miller (1993) analysed whether preferences obtained from this kind of photomontage might be related to preferences obtained from photomontages based on two-point perspectives, which can be obtained in real environments. The results from their study proved that both these media representations are valid for the purpose of identifying user preferences, and users are more interested in the physical characteristics of the streetscapes than in the realism of the photomontages.

The media representations adopted in the empirical investigation presented in this book were based on the method developed by Stamps (1993). Each commercial street facade was represented by two kinds of photomontage: for the first one (Type A), the entire row of buildings was photographed from one station point generating a two-point perceptive image, while for the second one (Type B), each building was photographed separately and the photographs pasted together to form an elevation montage (see Figure 4.1). Another study by Stamp (1997) demonstrated that users tend to dislike photomontages of streetscapes with cars, poles, and wires, while photomontages of streets with pedestrians and trees tend to be preferred. As this book focuses on user evaluation of the relationship between commercial signs and building form, other variables which may interfere with users' answers, such as trees, cars, poles, wires, pedestrians, scaffolding, and

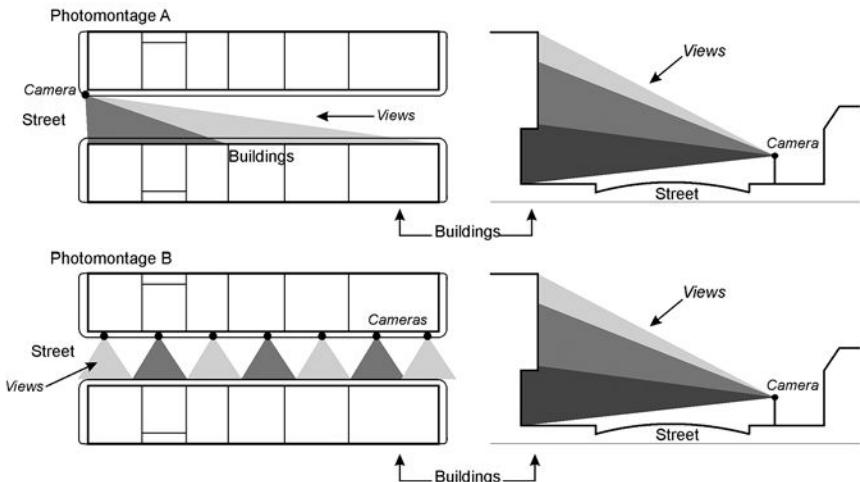


Figure 4.1 Procedures showing how the photographs (views) were taken to produce the colour photomontages (Source: author)



Figure 4.2 Example of photomontages Type A and Type B before and after correction of visual distortions (Source: author)

street furniture, were deleted from the photomontage. These deletions were done to avoid misinterpretation of the findings. In addition, parallax distortion was corrected in both procedures.

To carry out the photomontages, the commercial street facades were photographed with a 50 mm lens camera. Photographs captured by this lens are the most realistic images that a photographic camera can produce in comparison to images obtained by human eyes (Objectives lenses, 1998, Thiel, 1997).

Software packages were used to create the photomontages and correct visual distortions (see Figure 4.2).

Interviews

Interviews are recognized here as a useful and effective data-gathering method because: (i) they can provide an opportunity to establish rapport with City Council officers from each case study and stimulate the trust and cooperation needed between the researcher and interviewees to obtain the relevant information, (ii) they can provide an opportunity to pose questions that cannot be raised using the other methods, and (iii) they can allow flexibility in determining the wording and sequence of questions by providing the researcher with a greater degree of control. Structured interviews were used because a clearly specified set of questions were investigated, and the views of City Council officers from different case studies needed to be combined and compared. This kind of interview was also chosen because it avoids the looseness and inconsistency that can result from informally gathered interview data (Rosnow and Rosenthal, 2012, Goodrich, 1980).

The interview questions were designed to investigate how the operation of commercial signage controls is carried out in the historic city centres of Oxford, Gramado, and Pelotas. The following issues were explored: (i) presence of commercial signage controls in the city centre and the form they take, (ii) aims of these controls, (iii) group responsible for the development of commercial signage controls, (iv) efficiency of these controls, (v) professionals consulted during the development of commercial signage controls, (vi) public participation in the development of these controls, (vii) enforcement of these controls, (viii) influence of these controls on the appearance of the city centre, (ix) installation of new commercial signs, (x) relationship between the aims of the commercial signage controls adopted in each case study and the image promoted of the city centre by the local authority through marketing the city and urban tourism strategies, and (x) development of new commercial signage controls. These aspects were analysed first through the review of legislation and guidelines related to the commercial signage controls applied in each case study. The results from the interviews were compared with these initial findings in order to have a full understanding of how commercial signage controls are approached in each city.

The interview sessions were designed using standardized procedures: the questions were formulated before the interview and asked in a specific order and manner to every interviewee. It helps to minimize the multiplicity of interpersonal variables involved in a two-way conversation, and to ensure greater consistency in the gathering of data (Sommer and Sommer, 2002, Coolican, 2009, Bryman, 2004). The standardization of how the interviews were conducted in terms of both the asking of questions and recording of answers meant that any variation in responses was due to differences in how commercial signage controls are approached in each case study and not because of the interview delivery. The aim of each interview session was to keep the error component to a minimum, as error has an adverse

effect on the validity of a measure. Eleven open-ended questions were designed. The interview itself was carried out in an informal, relaxed atmosphere in which complete and meaningful answers, kept in context, were forthcoming. In Gramado and Pelotas, where more than one officer participated in the interview, some questions were answered by more than one individual. The pre-set questions used in the interviews are presented in Appendix F.

The interviews were conducted with City Council officers from Oxford, Gramado, and Pelotas, who were selected as discussed earlier. The sessions took place at the City Council offices of each case study, and did not last more than one hour. The interviews were audio-recorded with the permission of those taking part.

Focus Group

The focus group is recognized as a useful method of data collection for this investigation. It offers the opportunity for (i) people to probe each other's reasons for having a certain view, (ii) participants to be able to bring to the fore any issues related to the topic that they deemed to be important and significant, (iii) individuals to be able to argue with each other and challenge each other's views, and (iv) the researcher to be able to analyse the ways in which individuals collectively make sense of the phenomenon and construct meanings around (Bryman, 2004, Sommer and Sommer, 2002).

A focus group discussion was carried out in the case study where the commercial street facades chosen as the worst streets in terms of appearance are located. The objective was to complement the quantitative results obtained from questionnaire, and clarify certain issues that could not be fully investigated through that method. The focus group attempted to identify: (i) which factors contribute to increasing the visual pollution in the city centre analysed, and what can be done to reduce it, (ii) what residents think about the relationship between the commercial signs and building facades in the historic city centre, and (iii) whether they agree with the evaluations of users from the other case studies about the commercial street facades located in their city. Another issue was also discussed: the lack of interest by shop owners in discussing the visual pollution of the city centre.

An exploratory approach was adopted to manage the focus group. A small number of very general questions to guide the debate were presented to the participants at the beginning of the session. The main advantage of allowing this kind of free debate is that the researcher stands a better chance of understanding what individuals see as important or interesting. Researcher's role in the focus group is as moderator, asking questions in order to facilitate the conversation but maintaining a neutral attitude towards the opinions expressed.

The sample involved 22 people comprising (i) City Council officers, (ii) students of law and architecture, (iii) lecturers of law, civil engineering, architecture and edification technician schools, (iv) university staff, and (v) professionals who have offices and/or offer services in the city centre (lawyers, architects, urban planners, philosophers, historians, dentists, agronomists, journalists and so on). The focus

group began with an introduction in which the researcher thanked people for taking part, the participants introduced themselves and the researcher presented the goals of the study and the format of the focus group discussion. Support material such as photographs and postcards of the city centre, and a summary of the objectives of the focus group were given to the participants. The discussion took around 3 hours allowing full exploration of the topic, and it was audio-recorded with the permission of the participants.

The participants became fully involved in the discussion, and all of them expressed their views. There were no dominant personalities during the discussion, and the participants felt comfortable about interacting with each other. As only volunteers took part in the focus group, this investigation assumes that, if someone was interested in participating in this kind of discussion, it is because he/she wanted to express his/her views about the relationship between commercial signs and building facades in the city centre.

At the end of the debate, a summary document was completed and sent to the head of the Planning Department of the City Council. It presented the main issues discussed during the focus group, outlining the proposed actions put forward by the participants that could decrease the visual pollution in the historic city centre. At a later date, this document was used by the City Council as a theoretical argument to support the Municipal Law n.5639 of 2009, which proposes roles to control commercial signs in the historic city centre of the case study analysed.

Methods of Data Analysis

Qualitative and quantitative approaches were adopted to analyse the data as described below.

Analysis of Documents and Archival Records: Qualitative Approach

The contents of the documents collected (legislation and guidelines related to commercial signage controls) were analysed and compared qualitatively in order to understand how commercial signage controls are approached in each urban context. An explanatory approach was adopted to review these documents. It was assumed that these documents were written for a specific purpose and audience. By trying to identify these, the analysis was less likely to be misled, and more likely to be correctly critical in interpreting the contents of such evidence. The review of the documents was also carried out in relation to the appearance of the commercial streets in the sample. This was done in order to identify whether the legislation and guidelines relating to the control of commercial signs in each case study have been effective in avoiding visual pollution. A comparative analysis between the case studies was made in order to identify similarities and differences related to the operation of commercial signage controls adopted in each city. A descriptive approach was also carried out to analyse the archival records (maps,

aerial photographs, general data related to the case studies, photographs, and postcards).

Analysis of Commercial Street Facades: Quantitative Approach

The physical characteristics of the commercial street facades in the sample were analysed through systematic observation of these streets on-site and through colour photographs. The colour photomontages adopted in this study were also used to analyse the physical features of the streets, such as the percentage of street facade cover by commercial signs and the number of vertexes of a street silhouette. The following data obtained on-site were tabled and compared in order to characterize the historic city centres of the case studies: (i) level of order among commercial signs and buildings, (ii) relationship between the aesthetic composition of these media and building facades, and (iii) general visual character of the commercial street facades. At this stage, record cards were designed and applied to aid observation of physical characteristics of the commercial street facades in the sample on-site, and to allow the same characteristics observed in one street to be observed in another.

Analysis of Questionnaires: Quantitative Approach

Data from questionnaire answered on-site (type A) was analysed descriptively through the frequencies of user responses. As the purpose of this questionnaire was simply to test whether the media representation adopted served as an adequate substitute for the analysis of user perception and evaluation of commercial streets on-site, the user answers to questionnaire type A were compared with the user answers to questionnaire type B, answered off-site.

Nonparametric statistical tests were applied to analyse data from questionnaire type B. The nonparametric statistical approach was chosen because it is difficult to make stringent assumptions about the population from which the sample is selected when user perception and evaluation of the built environment is investigated. This approach does not take into account an estimation of parameters of the distribution of scores in the population from which the data are sampled and assumptions concerning the shape of that distribution. In terms of the studies of Environment Behavioural, the main advantages of this approach are: (i) the validity of the tests is not affected by whether or not the distribution of the variable in the population is normal, and (ii) the tests of differences in central tendency are not affected by one or a few very extreme scores; in parametric tests, an extreme score in a set of data can make the tests less powerful (Russo, 2003, Siegel and Castellan, 1988, Howell, 1997). The content analysis was carried out to analyse data from the open-ended questions. However, as this analysis was based on an inductive approach, categories or themes created to examine user responses were not predetermined.

Analysis of Interviews and Focus Group: Qualitative Approach

The method adopted to analyse data from the interviews and the focus group discussion has been referred by Hugh Coolican's most popular book, 'Research Methods and Statistics in Psychology' (2009), as a qualitative version of content analysis. With regard to the data from the interviews, transcripts were analysed to find themes, but these were not put into predetermined categories. The data was not analysed quantitatively; the analysis of the results remained as qualitative, and the reporting of each theme was related to one or more quotations in the transcript. The process of data analysis involved a careful translation of the interviews in Portuguese to English ensuring that the translation did not alter the meaning of user responses, transcriptions of the interviews, identification of themes related to the issues investigated, and interpretation of the data.

As the transcriptions were analysed by identifying themes, the identification of these themes involved coding. This coding concerned recognition of passages in the texts and definition of labels to them, which indicate thematic ideas related to the subjects investigated. Two different levels of codes were used: one that reflected the representation of facts, and other that was a heuristic tool to enable further investigation and discovery. To begin with, the codes were acting as collection points for significant data, while afterwards, the codes were markers or pointers to the way in which the researcher rationalized what was happening (Seidel and Kelle, 1995). Interpretation of data was the most important stage since the first three steps of this analysis were nothing more than descriptive summaries of what users said. The interpretation of the qualitative data focused on an analytical understanding that began to explain why things are as were found and what might be done to improve the problems identified by users. As suggested by David Morgan and Richard Krueger in 'The Focus Group Kit' (1998), the analysis was based on notes made by the researcher and by participants during the debate, and on a document produced at the end of the discussion.

Conclusion

The empirical investigation presented in the next chapters adopted the Environment Behavioural approach, and applied quantitative and qualitative methods of data collection and analysis. A multiple method survey design was applied in order to combine different methods, which compensate for their particular faults and limitations. This investigation also took into account that the selection of methods should be based on the time and economic resources available, and on the practicality of data collection in different countries.

For the delimitation of the case studies, the probability sampling principle was adopted. The main criteria to select the countries to be analysed were: (i) a country where a national approach to help local authorities to guide and control commercial signage in historic city centres is applied in practice, and (ii) a country where there

is no national approach to control commercial signage leaving local authorities with the responsibility to develop commercial signage controls, and to decide whether these controls are necessary in historic city centres. England and Brazil were chosen because they cover all the criteria specified in this chapter. Three historic cities were defined as case studies: Oxford, in England, and Gramado and Pelotas, in Brazil.

The non-probability sampling principle was applied to select participants. The criterion of purposive sampling was adopted to select users for the interviews. City Council officers of each case study were selected since they were considered the most representative actors for the issues analysed and as having more appropriate expertise in the matter. The criterion of opportunity sampling was applied to select the respondents for the questionnaires: users would decide whether they would like to answer the questionnaires or not. A purposive and opportunity sample was selected to conduct the focus group discussion: City Council officers and shop owners were invited in person; other participants were volunteers, who contacted the researcher. Articles published in local newspapers to get people involved in the questionnaires and in the focus group discussion were recognized as an important technique to persuade users to participate in Brazil.

Five different methods of data collection were adopted: (i) documentation review and archival record, (ii) systematic observation of physical characteristics of commercial streets on-site and through photographs, (iii) questionnaires, (iv) interviews, and (v) focus group. The qualitative analysis of data from documentation review and archival records, interviews, and focus group discussion was related to processes and procedures whereby the researcher moves from the qualitative data that had been collected into some form of explanation and understanding or interpretation of the subject investigated. The quantitative analysis of data from (i) systematic observations of physical characteristics of commercial streets on-site and through photographs was related to frequencies, and (ii) questionnaires to nonparametric statistical tests and frequencies.

Now, the following chapters discusses the main results related with the effects of commercial signage on users quality of life.

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Chapter 5

People's Quality of Life and Commercial Signage Control Management

This chapter discusses how commercial signage controls are approached in the cities of Oxford, Gramado and Pelotas showing the influence of marketing the city and urban tourism strategies on the control of commercial signs in each historic city. Later, it presents user responses related to: the necessity for the application of commercial signage controls, user desire to get involved in the development of these controls, those physical features of the streetscape recognized by users as important in the development of commercial signage controls, city centre appearance, city centre functions, city centre image, and wayfinding through commercial signs.

Understanding Historic Context as a Background for Urban Evaluation

The contextualization of the case studies is fundamental to provide a general picture of the different urban contexts that the participants of this investigation experience. General information of the County of Oxfordshire in England and the Federal State of Rio Grande do Sul in Brazil, and of the cities of Oxford, Gramado, and Pelotas are presented below.

Oxfordshire in England and Rio Grande do Sul in Brazil

Oxfordshire is in south-east England, and it is divided into five local government districts: Oxford, Cherwell, Vale of the White Horse, West Oxfordshire, and South Oxfordshire. The main centre of the population is the city of Oxford. A total of 653.800 people live in Oxfordshire (Census UK, 2011), which has an area of 2.605 km²; the demographic density is 251 people per km². The majority of residents are English. The largest group of immigrants came from Europe but other ethnic groups are also found but to a much smaller extent (such as Indian, Pakistani, Caribbean, Chinese, Japanese, African, Bangladeshi, Australian, New Zealander and South, Central and North American). This county has one of the major tourism industries of England. This area is also noted for the concentration of performance motor sport companies and facilities; Oxford University Press has headed a concentration of print and publishing firms; and the University of Oxford is also linked to the concentration of local biotechnology companies (Mackay, 1993).



Figure 5.1 Geographic location of Oxfordshire in England and Federal State of Rio Grande do Sul in Brazil (Source: author)

Rio Grande do Sul is the southernmost Federal State in Brazil, and it has 497 cities; among the main cities are Porto Alegre (State Capital) and Pelotas. A total of approximately 10.693.929 million people live in an area of 281.730 km²; the demographic density is 38 people per km². The population consists primarily of the descendants of European immigrants, especially Portuguese, Italians, and Germans. Groups of Poles, Spanish, Russians, Lithuanians, Ukrainians, and Jews are also found. Rio Grande do Sul is known for grain production, viticulture, ranching, and for its industrial output. Ecotourism is also popular in the cities of Gramado and Canela, which are well-known as tourist destinations. The cold weather is among the attractions for tourism in Rio Grande do Sul (see Figure 5.1).

Cities of Oxford, Gramado and Pelotas

The city of Oxford, in Oxfordshire, is situated 82.7 km northwest of London and has 151.900 residents (Census UK, 2011). According to Geoffrey Tyack in his book 'Oxford: An Architectural Guide' (1998), this city owes its origins to the expansion of urban life in England, which occurred in the late ninth and tenth centuries. This city was first mentioned in written records in 900 A.D, and won the City Status in 1542. After the Second World War, it became a recognized centre of research activities, especially in the sciences and social science. This city is recognized as one of the most important historic cities in England. The influx of migrant labour to the car plants, recent immigration from south-east Asia, and a large international student population have provided Oxford with a cosmopolitan character. By the early twentieth century, Oxford experienced rapid industrial and population growth, with the printing and publishing industries becoming well



Figure 5.2 City centre of Oxford in England, a place characterized by preserved historic buildings and intense commercial activities (Source: author)

established by the 1920s. In the present time, the city is mainly characterized by the academic life promoted by two Universities: University of Oxford, the oldest university in the English-speaking world, and Oxford Brookes University, a new university which trace its origins to 1865. Teaching at Oxford has existing in some form since 1096. In terms of streetscape, as already described by Julie Kennedy (1998) in 'Changing Faces of Oxford City Centre', the city centre of Oxford contains 'shops, offices and, as then, the colleges so that the population is transient'. This area is characterized by preserved historic buildings and intense commercial activities (see Figure 5.2). In 1879, the famous English poet Gerard Manley Hopkins described the visual character of Oxford in one of his poems as 'Towery city and branchy between towers' (Tyack, 1998).

The city of Gramado, in the Federal State of Rio Grande do Sul, is located 120 km north of Porto Alegre, the State Capital, and has 32.273 people (Censo, 2010). This city was once part of 'Santo Antonio da Patrulha', which was one of the four first most important cities that characterized the history of Rio Grande do Sul (Weimer, 2004, 1992). The majority of its early inhabitants were Swiss, German, and Italian immigrants, who gave the city a unique visual character compared to



Figure 5.3 City centre of Gramado in Brazil. Contemporary building in front of the main square of the city (Source: author)

other Brazilian places; its character was influenced by the architecture and lifestyle brought by them. During the early 1950s, four German immigrants, Roosenfeld, Nelz, Renner and Knorr, arrived in Gramado with progressive views, and began to buy land in order to avoid disordered urban growth, which had already begun in other Brazilian cities and towns. Araucaria pines and hydrangeas began to be cultivated by them, and today the landscape of Gramado is characterized by this vegetation, which forms a green belt around the city (Daros and Barroso, 1995). Gramado was recognized as a city in 1954, and, since then, the local authority has promoted this place as a national tourist attraction, and its particular landscape is one of its visual appeals. In terms of streetscape, the city centre of Gramado is characterized by contemporary buildings; few historic buildings dated from the village foundation (dated from 1913) can be seen in the city centre today. The visual character of this area has been re-designed: historic buildings have been demolished to make way for new ones with a strong commercial appeal; the idea is to promote the city as the 'Brazilian Switzerland' (see Figure 5.3).

The city of Pelotas, also in the Federal State of Rio Grande do Sul, is located 249 km from Porto Alegre and 150 km from the Uruguayan border, and has 328.275 habitants (Censo, 2010). It is one of the most important historic cities in Rio Grande do Sul, and is recognized by its cultural and historic role in the



Figure 5.4 City centre of Pelotas in Brazil. An exemplar of historic building does not harmed by commercial signs (Source: author)

urban development of this State. The history of the city begins in June 1758. In 1943 Pelotas was recognized as a city but, before that, this place was already well known across the country. In the nineteenth century, Pelotas was known as one of the most prosperous centres of cultural and commercial activities in Brazil, and the richest city of the State. During this period, several remarkable buildings were built in the city, and today they still portray the visual character of Pelotas. The majority of immigrants came from Portugal, and their influence determined many features of the local character, culture, and architecture of the city. German immigrants also came to Pelotas, as did other European groups, but in smaller numbers. The increasing economic development of the city was brought to a halt by the economic circumstances created after the First World War (Arriada, 1994). In the present time, Pelotas has a flourishing peach industry and is well known for its production of traditional Portuguese sweets. This city hosts two universities responsible for an important part of the local economic development, and it is the biggest and most developed commercial centre in the southern part of Rio Grande do Sul. In terms of streetscape, the city centre of Pelotas is characterized by contemporary and historic buildings, the last ones dating from the nineteenth century are in general harmed by commercial signs; very few historic buildings are still preserved and not covered by these media as we can see in Figure 5.4 (Portella, 2003, Schlee and Moura, 1998)

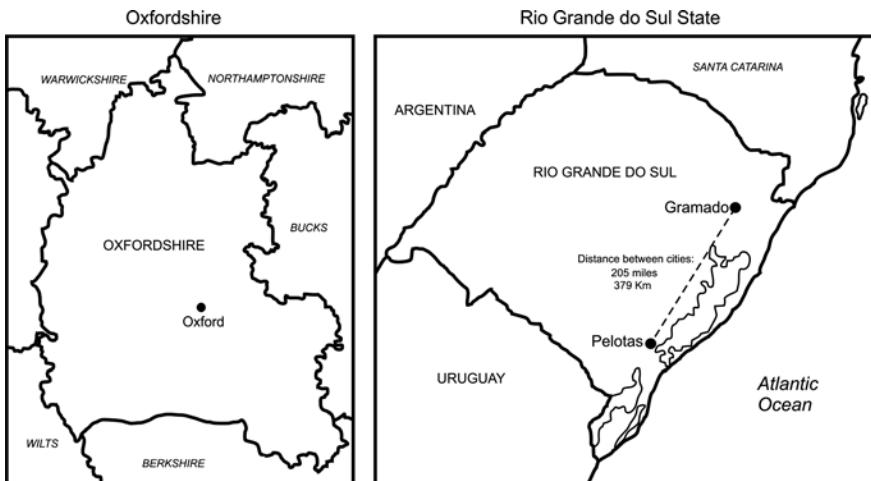


Figure 5.5 Geographic locations of Oxford in UK, Gramado and Pelotas in Brazil (Source: author)

Figure 5.5 identifies the geographic locations of the three cities studied in this book – Oxford in UK, Gramado and Pelotas in Brazil.

Different Commercial Signage Approaches

This section presents legislations and guidelines related to commercial signage controls adopted in Oxford, Gramado and Pelotas, and discussions obtained from the interviews with City Council officers. Comparing Oxford and Gramado, the main difference between the commercial signage controls adopted in each city lies in their objectives. In Oxford, controls are applied to protect the historic character of the city centre, mainly in conservation areas and to listed buildings. In Gramado, these controls are designed to reinforce the visual character of the city promoted by the local authority as the 'Brazilian Switzerland'. Protection of historic buildings was not identified in any document reviewed as an issue taken into account by the local authority of Gramado. In addition, the findings from the interview with the City Council officers of Gramado show that the promotion of this city as the 'Brazilian Switzerland' through marketing the city and urban tourism strategies employed by the local authority clearly influences the way that commercial signage controls are designed.

In Pelotas, the current commercial signage control was implemented in December 2009 and aims to protect the visual quality of the built environment and reduce visual pollution. Before that, the previous control, adopted in 1970, was extremely permissive, resulting in the damaged of the historic heritage of the city. This control let shop owners display shopfronts and window displays

in conservation areas without City Council knowledge. Consequently, historic buildings were harmed by these media, and the resulting visual pollution has been an increasing problem since then.

The City Council gave two years for commercial establishments to adapt their shopfronts and window displays to the new regulation; however this deadline ended in December 2011 and the local authority did anything with the shop owners that did not attend the policies; it is important to highlight that these are the majority of cases in the city centre. In January 2013 a new Mayor was elected, and he promised that now the irregular signs will be removed; however this kind of action cannot lie on political parties, it needs to be an approach adopted by the Council as a long term commitment. Even though the new local authority is interested in the effective implementation of this new commercial signage control, the approach in applying this kind of control is still inadequate. The following quotation extracted from the transcription of the interview conducted with a Planning City Council officer in Pelotas illustrates how the local authority approaches the enforcement of commercial signage controls; this appears to be one of the reasons why visual pollution is a problem in this city:

after a shop owner displays his commercial sign on his building, it is too difficult to remove it (...) if it is removed, it creates a heavy atmosphere in local society.

We have examples of shop owners that want their shops to stand out from the others (...); for example, there is a confectioner at Goncalves Chaves Street who displayed a gigantic sign in a triangular shape on his shop. It is totally against any kind of guideline to control commercial signage, even the Code of Postures¹ (...); if you go to the site and ask him to take the sign down, he will start to complain that he is helping the city in a lot of other ways like in (...) the Fenadoce [a national event that happens in the city every year], and the City Council goes there to remove his shopfront. In some respects, he has a point (...) [City Council Officer in Pelotas].

On the other hand, the results from the interviews with City Council officers in Oxford and Gramado indicate that the enforcement of commercial signage controls in these cities is effective, due to the approach adopted by the local authority in dealing with this issue. In Oxford, when irregular commercial signs are displayed, an enforcement notice is sent to the person responsible for these signs, and, if these media are not removed, he or she is prosecuted through the courts. In Gramado, a penalty fee is applied to any shop owner who displays irregular commercial signs; these elements are also removed by the City Council. If the removed signs, kept in a public deposit, are not collected by their owners within 24 hours, these media are incinerated. Although the City Council of Gramado is fully committed to the control of commercial signs, few irregular media are still noticeable in the city centre, such

1 In the Brazilian context, Code of Postures means a group of policies that indicate the approach of the local authority to deal with a particular situation.

as at Borges de Medeiros Avenue. In this case, the power of the local authority appears to be ineffective in dealing with a small number of shop owners who do not mind paying the penalty fee and replacing the removed signs with new ones.

Comparing the Brazilian cities, the differences between the commercial signage control approaches adopted in Gramado and Pelotas lie in two issues: (i) the political context, and (ii) the level of public participation. In Gramado, since 1954, the local authority during different municipal administrations (the local authority in Brazil is elected every four years) has been following the same general principles and political ideology to make Gramado a tourist destination. On the other hand, in Pelotas, every time a new local authority is elected, projects started by the former government are usually forgotten. This fact makes it difficult to implement any kind of aesthetic control because any plan to improve the appearance of the city centre requires a long term commitment. In relation to the level of public participation, in Gramado, like Oxford, everyone can make comments during the process of development of commercial signage controls. In Pelotas, public participation does not happen at all, although some advertisers and a few shop owners are invited by the City Council to partake in informal discussions concerning guidelines to control shopfronts and window displays. However, a public meeting, as a workshop or focus group, open to the local community and members of civic societies is not on the agenda. This fact may influence the way that residents perceive themselves in the process of commercial signage control in Pelotas.

With regard to the analysis of the interviews conducted with City Council officers, in Oxford and Gramado, if irregular commercial signs are displayed in the city centre, local people express their disapproval to the City Council through letters, phones calls, and/or local media. In both cases, residents feel committed to ensure that the guidelines proposed by the local authority have been respected. This commitment might happen because they participate in the process of the development of guidelines to control commercial signage. In Pelotas, on the other hand, if irregular commercial signs are displayed in the city centre, local people do not denounce this situation because they believe that the local authority will not do anything. In addition, the fact that they do not have an effective participation in the process of the development of commercial signage controls may contribute to this lack of commitment.

Another main difference found among the commercial signage control approaches adopted in the cities studied is related to the attitude of shop owners in relation to the commercial signage controls. According to the City Council officers interviewed, (i) usually in Oxford, shop owners tend to respect the legislation and guidelines defined by the local authority, while (ii) in Gramado, in general, they are in favour of this kind of control, but if a few shop owners decide not to follow the guidelines, this is enough to make this entire user group adopt the same posture. Therefore, the administrative control of Gramado City Council is fundamental to ensure that shop owners do not disrespect the regulations. In Pelotas, shop owners usually do not respect the legislation and guidelines related to commercial signage;

if the City Council does not provide an effective control on-site, the implementation of any kind of aesthetic control becomes useless in this city.

These findings suggest that the appearance of the city centre of each city reflects the way that commercial signage controls are approached. A detailed discussion of the influence of commercial signage controls on the appearance of the city centres of Oxford, Gramado, and Pelotas is presented in the next sections.

Marketing the City and Urban Tourism Strategies

In Oxford, marketing the city and urban tourism strategies are applied to promote this city as a historic and tourist destination with a visual character built by preserved historic buildings. Postcards of the city centre illustrate this image that is held around the world (see Figure 5.6). In relation to the commercial signage approach adopted by the local authority, the design and control of commercial signs in conservation areas and on listed buildings is driven by the importance of preserving the history heritage. Aesthetic controls defined by the current Local Plan (2001–2016) guide the layout of new shopfronts, advertisements, and window displays within the city centre. According to the section 12.8 named 'Shop Fronts and Advertisements' of this Plan, 'planning permission will only be granted for new shopfronts whose design and materials respect the style, proportions and character of the existing buildings and enhance the streetscape'.

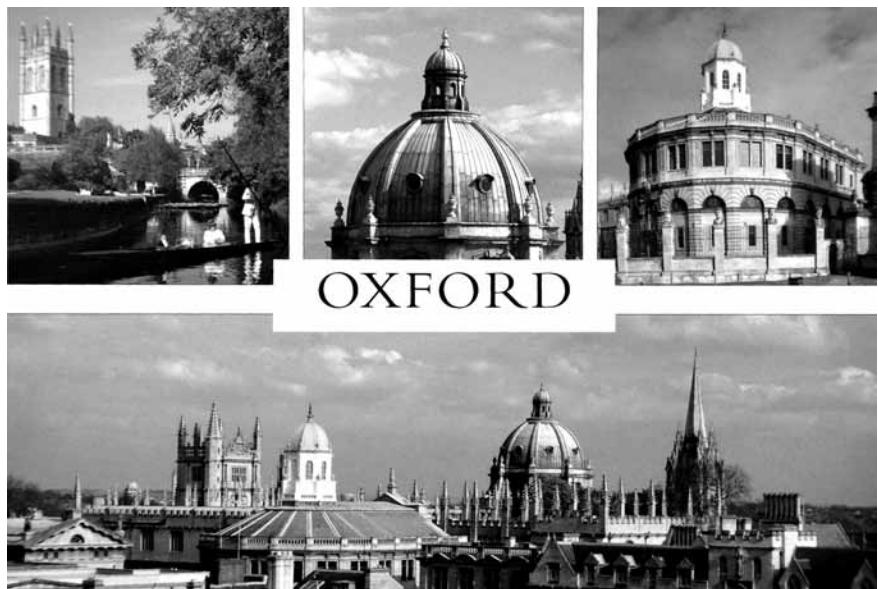


Figure 5.6 Postcard of the city of Oxford in UK (Source: postcard by 2002 Chris Andrews' Oxford Picture Library)



Figure 5.7 Postcard of the city of Gramado in Brazil (Source: postcard photo by Harry Schuch)

In Gramado, the local authority has designed and adopted restrictive aesthetic controls related to building facades and commercial signs in order to create a historical theme environment of the city. This themed environment is also promoted through marketing the city and urban tourism strategies. The image of Gramado as the 'Brazilian Switzerland' is advertised through posters, city guides, glossy brochures, postcards, movies, magazines, newspaper and so on (see Figure 5.7). The City Council adopts aesthetic policies, which require building facades to be designed in a 'Neo-Bavarian' architectural style (see Appendix A). Similarly, the signage of the entire city is designed to complement this style, and reinforce the manufactured character. The main problem with this kind of approach is that the creation of a themed city is most likely destroying the original local character and history of Gramado. This assumption is supported by the environmental psychologist Daniel Levi (2005), who argues that the important historical attributes of a place can be lost by the development of historical theme environments.

The idea of promoting Gramado as a city which is reminiscent of Alpine settings is inspired by the fact that the majority of its population are descendants of immigrants from Switzerland, Germany and Italy, and the architectural style brought by them was mainly Bavarian (Daros and Barroso, 1995). However, the results from the interview with the City Council officers showed that the local authority supports the demolition of original buildings, and their replacement by contemporary architecture designed to look like the originals. This kind of architecture, which can be referred to as 'pastiche' has been changing the identity



Figure 5.8 Postcard of the city of Pelotas in Brazil (Source: postcard photo by Marilú Duarte)

of Gramado. The results from the systematic observations of its commercial streets indicate that, at least in the city centre, almost all original buildings have been demolished and replaced by their 'clones'. Critics argue that the approach adopted by the local authority is wrong, and the visual character of Gramado should comprise the preservation of the historic heritage. However, Gramado is recognized as a very popular tourist destination in Brazil, indicating that tourists may like the manufactured streetscape promoted by the local authority. This city has been experiencing increasing economic development, and the tourist industry has become the main source of jobs for local people.

A completely different scenario is evident in Pelotas. This city has a very strong historic character represented by colonial and eclectic buildings still reasonably untouched, apart from the visual pollution caused by commercial signs. However, as mentioned by the City Council officers during the interview session, marketing the city strategies to promote this place as a historic and tourist destination have just recently been adopted by the local authority. The private sector has already been advertising this place as a well-preserved historic site through postcards, posters, pamphlets, and websites. However, this advertised image remains largely fictional (see Figure 5.8). The city centre of Pelotas is significantly harmed by commercial signs, the maintenance of historic buildings is negligent, and some historic buildings have been abandoned. The fact is that, since 2009, the City Council has been committed to the design and application of controls to protect the

historic character of the city, and to promote this place as a historic centre. Many building restoration projects have been implemented, and marketing strategies have also been applied. In this new era of Pelotas' city centre management, the new commercial signage control was designed to reduce the visual pollution caused by these media within the city's conservation areas. Although the implementation of this new control has been neglected until now, at least it marks a new stage in which the local authority recognizes the importance of aesthetic controls to preserve and protect the historic heritage against the impacts of disordered commercial signs.

Commercial Signage versus Visual Quality

In Oxford, shopfronts and window displays are ordered, and have been designed to respect the aesthetic composition of historic building facades and the historic character of the city. In Gramado, commercial signs are also ordered, but the appearance of the commercial streetscape has experienced many changes. In this city the original visual character of the commercial streets evident in old photographs is now replaced by contemporary buildings whose appearance is influenced by the aesthetic approach adopted by local authority to control building facades (see Figure 5.9). The City Council applies restrictive aesthetic controls to new buildings; these regulations define how building facades should be designed in the city centre ensuring that they are based on the Neo-Bavarian architectural style. These buildings have been changing the visual character of this city, and the design of commercial signs is reinforcing this transformation.

On the other hand, the original historic character of the city centre of Pelotas still remains; however, it is harmed by commercial signs. This problem began in the 1960s when the importation of new technologies and consumer products instigated the display of bigger and more luminous commercial signs in the city centre. Many of these media began to be manufactured with materials such as acrylic, metal and plastic, plus neon for illumination. These elements were designed to cover almost the whole of a building facade (Portella, 2003). The first Local Plan of Pelotas, implemented in 1968, and the Code of Postures, implemented in 1970, did not include any guidelines for the protection of the historic heritage of the city. The analysis of these legislation showed that commercial signage controls were not part of the local authority's agenda at that time. The local authority believed that to modernize the city meant to forget historic character and introduce modern design, including modern architecture, commercial signs and billboards in the historic city centre. Consequently, since that period, the visual pollution in the historic city centre of Pelotas has been increasing each year (see Figure 5.10).

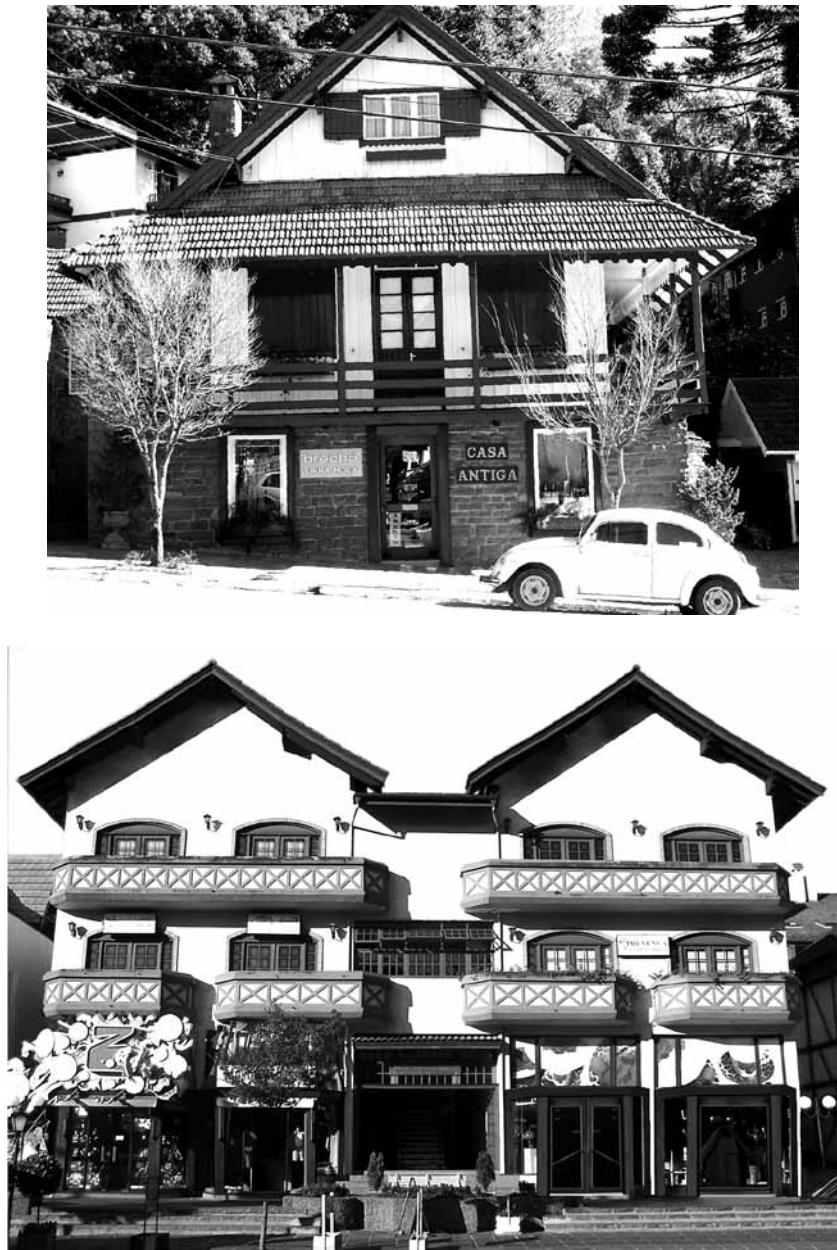


Figure 5.9 An original building still preserved, showing the architectural style brought by the first immigrants to Gramado, and a contemporary building representing the 'Neo-Bavarian' style promoted by the aesthetic approach adopted by the City Council, respectively (Source: author)



Figure 5.10 City centre of Pelotas in Brazil. The visual pollution is the major problem of this area (Source: author)

User's Evaluation and Signage Controls

The results from the empirical investigation show that people who live in places where commercial signage is ordered (Oxford and Gramado) share the same views with people who live in a place where visual pollution caused by shopfronts and window displays is a problem (Pelotas). The majority of users from Oxford, Gramado and Pelotas agree that commercial signage controls are necessary in the city centre, and they would like to be consulted when these controls are developed. In each city, lay people and professionals share similar views: they agree that commercial signage controls are necessary in city centres, and they would like to be consulted when commercial signage controls are developed. However, there are few users who agree with the importance of application of commercial signage controls but do not necessarily want to get involved in this issue. The reason for that may be the lack of public interest caused by the local authority that does not stimulate this kind of public participation in earlier stages of the design control; in the city of Pelotas it is a very common problem.

The majority of residents in Oxford, Gramado and Pelotas agree that commercial signage controls should comprise aspects related to appearance of buildings and commercial signs, historic buildings and public spaces, and number of commercial signs. There are no differences between users from these cities

in terms of evaluation of the importance attributed to appearance of buildings and commercial signs, and historic buildings and places. On the other hand, significant differences are found in terms of the importance attributed to number of commercial signs. Respondents who live in a country (Brazil) where an excessive number of shopfronts and window displays causes visual pollution tend to give more importance to the number of commercial signs as a factor that influence visual quality than respondents who live in a country (England) where the number of commercial signs is controlled. Users exposed to visual pollution are more sensitive to the presence of signage, as they experience everyday a disordered streetscape due to these media.

Furthermore, lay people and professionals have similar views in terms of the aspects that need to be taken into account in the development of commercial signage controls (appearance of buildings and commercial signage, historic buildings and places and number of commercial signs). One general consensus is highlighted between lay people and professionals: 100% of users from Oxford, Gramado and Pelotas mention appearance of buildings as a 'very important' and 'important' issue.

Commercial Streetscapes and User's Evaluation

Different commercial signage approaches promote different effects on the visual quality of historic city centres. These differences can be measured through user evaluation of the appearance of historic city centres, city centre functions, city centre image, and wayfinding through commercial signage.

Historic City Centre Appearance

In Oxford and Gramado, where commercial signage controls are effective and the streetscape is ordered, the city centre is evaluated positively by the majority of residents. On the other hand, in Pelotas, where commercial signage controls are not effective and the streetscape is disordered, the city centre is evaluated negatively by the majority of residents. There are no significant differences between lay people and professionals in terms of satisfaction with the appearance of the city centre of Oxford, Gramado, and Pelotas. The majority of lay people and professionals who are resident in Oxford and Gramado agree that the city centre of their cities is 'very beautiful' and 'beautiful'. At the same time, a significant parcel of lay people and the majority of professionals who are residents in Pelotas evaluate the city centre of this city as 'very ugly' and 'ugly'.

Appearance of buildings and commercial signs, historic buildings and places, and number of commercial signs have a 'very important' and 'important' influence on user satisfaction with the city centres of Oxford, Gramado, and Pelotas. It shows that these factors need to be taken into account in the development of commercial

signage controls since they have relevant influence on how people evaluate the streetscape of different places.

In the city centre of Oxford and Gramado, where commercial signage controls are applied, the appearance of buildings and historic buildings and places are the most important aspects that increase user satisfaction with these places. At the same time, in the city centre of Pelotas, where commercial signage controls are not effective, the appearances of buildings and commercial signs are the most influential aspects that decrease user satisfaction with this place.

Number of commercial signs is mentioned as an aspect that influences resident satisfaction with the city centre by 62.28% of users from Oxford, while, in Gramado and Pelotas, this number increases to 92.50% and 90.83 %, respectively. The satisfaction of people who live in England, where a national approach is applied to control commercial signage in historic places, can be less influenced by the number of signs. This lesser influence exist because users in England are usually not exposed to the negative effects that excessive numbers of commercial signs cause to the appearance of historic city centres. However, users who live in Brazil, where the majority of historic city centres are harmed by excessive numbers of shopfronts and window displays, tend to be more aware of the number of signs when the appearance of city centres are evaluated. In the city centre of Gramado, the restricted number of these media is recognized as 'very important' and 'important' in its influence on user satisfaction with this place.

Additionally, 93.33% of residents in Gramado mention historic buildings and places as a 'very important' and 'important' aspect on their satisfaction with the city centre. However, in this city there are no regulations to protect historic buildings and places, and the commercial signage approach adopted does not make any mention of preserving historic heritage. This finding indicates a weakness of the commercial signage control approach applied in Gramado. The protection of historic buildings and places needs to be included in this approach, since these aspects are recognized as influential on resident satisfaction with the historic core.

In light of these issues, approaches to control commercial signs need to highlight the relevance of defining a limit to the number of shopfronts and window displays on commercial street facades. Moreover, as preserved historic buildings and places not harmed by these media have a positive impact on user satisfaction with the appearance of city centre, it seems obvious that a general commercial signage approach should be used to attempt to protect historic heritage. In addition, there are no significant differences between lay people and professionals from the different case studies in terms of evaluation of the importance attributed to appearance of buildings and commercial signs, historic buildings and places, and number of commercial signs, when comparing user satisfaction. It proves that, although many studies in the literature confirm differences between responses of these user groups, there is a common sense when the analysed issue is visual pollution.

Order among Commercial Signs

In the city centre of Pelotas, where commercial signage controls are not effective and the streetscape is disordered, the majority of residents sum up commercial signage as 'disordered' and 'very disordered'. On the other hand, in the city centre of Oxford, where commercial signage controls are effective and the streetscape is ordered, the majority of residents sum up commercial signage as 'very ordered' and 'ordered'. When analysing the city centre of Gramado, where this kind of control is also effective but approached in a different way compared to Oxford, the majority of residents evaluate commercial signage as 'neither ordered nor disordered'. The findings show that different commercial signage approaches result in different user perception and evaluation of order among commercial signs. For example, in Gramado where, although the City Council is fully committed to enforcing respect for commercial signage controls by shop owners, some irregular signs can be noticed along the main commercial street avenue. In this regard, these irregular signs can have been a contributory factor, which decreases user evaluation of order with Gramado streetcapes.

With regard to the case studies of Gramado and Pelotas, the higher the user perception and evaluation of order among commercial signs, the higher the user satisfaction with the appearance of the city centre. There is no correlation between these two variables when responses of users from the city of Oxford were analysed. However, the frequencies of user answers demonstrate that the majority of people who evaluate Oxford city centre as 'very beautiful' and 'beautiful' sum up commercial signage as 'very ordered' and 'ordered'. In this context, a general commercial signage approach should encourage design guidelines to order commercial signs, which will increase satisfaction of users from different urban contexts with the appearance of commercial streetscapes.

Commercial Signs to reinforce Historic City Centre Appearance

Shopfronts and window displays reinforce the commercial appearance of city centres even when these media are designed to preserve the historic character of the city centre. The majority of residents in Oxford, Gramado, and Pelotas agree that commercial signs reinforce the commercial appearance more than the historic appearance of the city centre in their cities.

According to residents' answers, commercial signs reinforce the commercial appearance in the city centre of Pelotas more than in the city centre of Oxford. Some residents in Oxford mention that the commercial signage reinforces the historic and the commercial appearance of Oxford city centre simultaneously (20.17% of users), while less than 10 % of residents share this view when analysing the city centre of Pelotas. The findings also demonstrate that the highest number of users who agree that commercial signage reinforces the commercial appearance of the city centre is in Pelotas, where commercial signage controls are ineffective and historic buildings are harmed by these media. At the same time, Oxford city centre, where commercial

signage controls are applied and the preservation of historic buildings is one priority of these controls, has the lowest number of users who agree that commercial signage reinforces the commercial appearance of the city.

There is no relationship between user perception and evaluation of commercial signage as an element to reinforce the historic and/or the commercial appearance of the city centre, and user satisfaction with the city centre. In Oxford and Gramado, where commercial signage is ordered, the majority of users who evaluate the city centre as 'very beautiful' and 'beautiful' agree that commercial signage reinforces the commercial appearance of these places. At the same time, in Pelotas, where commercial signage is disordered, all users who evaluate the city centre as 'very ugly' and 'ugly' agree that commercial signage reinforces the commercial appearance of this place.

What does (or does not) makes Historic City Centre an Attractive Place?

According to users from Oxford, Gramado, and Pelotas, appearance of buildings and commercial signs, historic buildings and places, and numbers of commercial signs are recognized as relevant aspects in making the city centre an attractive place. The majority of residents in each city agree that these four aspects are 'very important' and 'important' in making the city centre of their cities an attractive place. The most important aspect in making the city centre an attractive place is the appearance of buildings, while the least import is the number of commercial signs.

In the city centres where commercial signage controls are effectively applied (Oxford and Gramado) users tend to mention aspects that are already important in making those centres attractive places. However, users from Pelotas, where visual pollution is a problem, tend to mention as important the aspects that could be improved to make the city centre an attractive place. These issues were taken into account in the interpretation of the results.

Users from Gramado tend to give less importance to historic buildings and places in making the city centre an attractive place than users from Oxford and Pelotas. At the same time, users from Pelotas tend to give more importance to the number of commercial signs in making the city centre an attractive place than users from Oxford. There is no difference between users from the two Brazilian cities in terms of the level of importance attributed to the number of commercial signs. It shows that the way that commercial signage is approached can influence user perception and evaluation of those aspects considered most important in making the city centre an attractive place. Gramado, where historic buildings and places are not the main landmarks in the city centre due to the design approach adopted by the local authority, is the city where the lowest numbers of users mention historic buildings and places as an important aspect in making this centre an attractive place. In Pelotas, where commercial signage controls are ineffective and an excessive number of commercial signs increase visual pollution, the number of commercial signs is seen as more important to make in future this centre an attractive place than in Oxford. These results indicate that users who



Plates 1a and 1b

Historic building facades fragmented by colour and commercial signs in the city of Pelotas in Brazil. It is a major problem that decreases visual quality in many Brazilian cities (Source: author)



Plates 2a and 2b

Historic city of Ouro Preto and Pelourinho Square in Salvador, respectively, located in Brazil. Colouration schemes are designed to enhance historic heritage in both urban sites (Source: author; Gabriela Fantinel Ferreira)

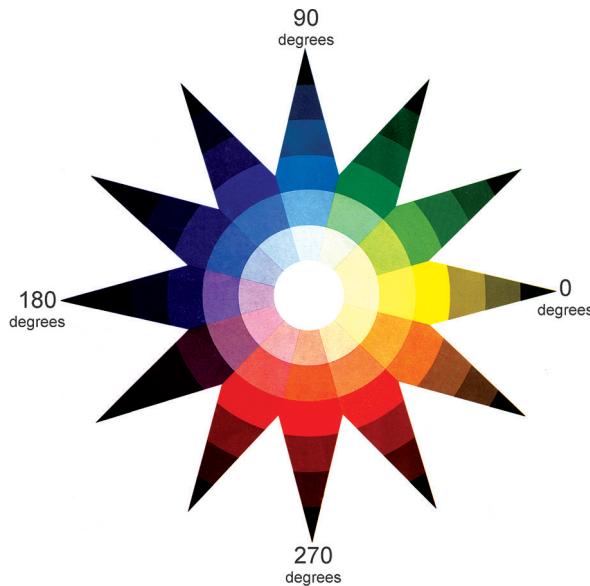


Plate 3 A representation of the chromatic disc which helps the analysis of colour harmony and contrast, see Table 1.5 in Chapter 1 (Source: author)

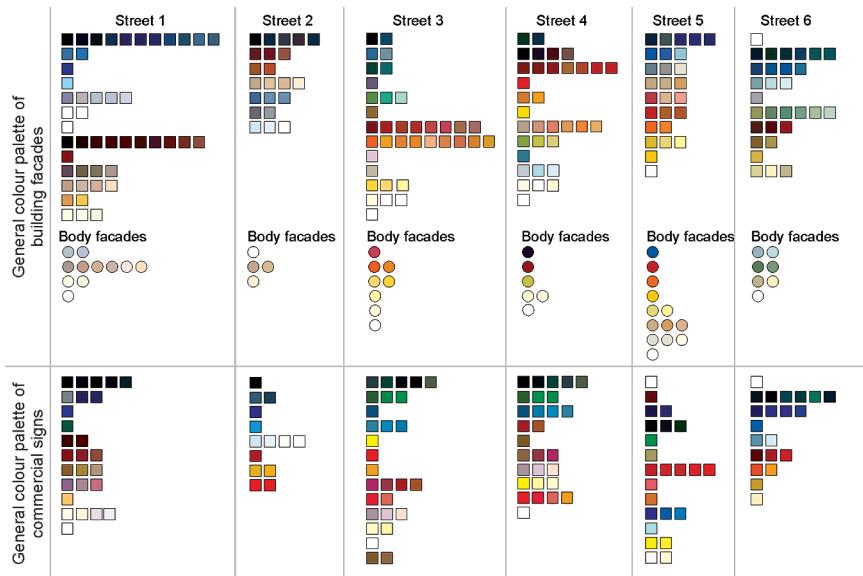


Plate 4a Graphics showing the colour analysis of the commercial streets analysed in this book: (a) the general colour palette of buildings and commercial signs (Source: author)

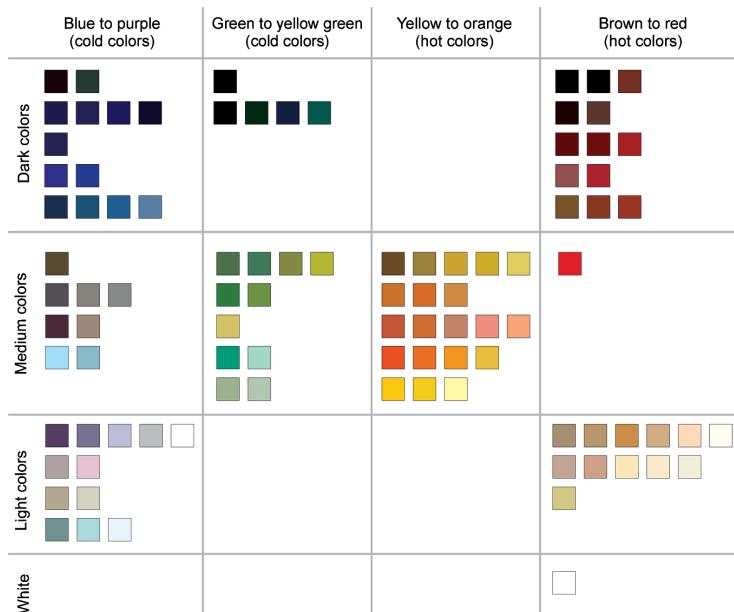


Plate 4b The identification of the chromatic groups by hues, temperature and luminosity

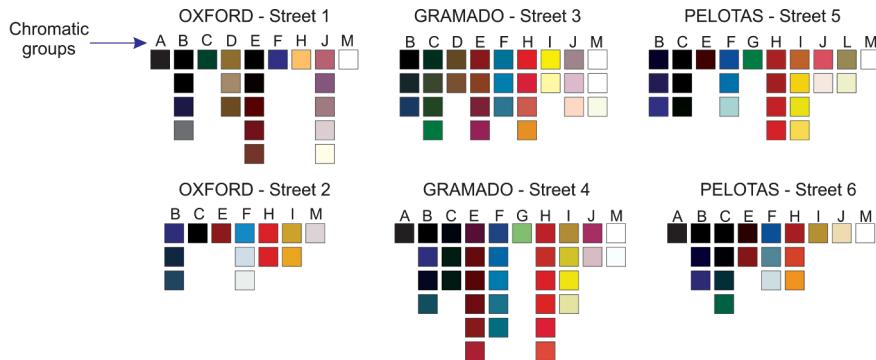


Plate 4c The chromatic groups of each street identified by letters

live in a country where the majority of cities are harmed by excessive numbers of commercial signs (Brazil) are more aware of the importance of controlling this issue for making city centres attractive places. In Oxford, because this aspect is already controlled by commercial signage guidelines, the largest number of users tend to focus on other aspects of the streetscape, such as the appearance of buildings and historic buildings and places.

In Gramado, the higher the user satisfaction with the appearance of the city centre, the higher the importance attributed to the appearance of commercial signs and the number of signs in making the city centre an attractive place. It shows that the commercial signage approach adopted in Gramado has achieved its objective of controlling the appearance and number of commercial signs in order to create a place evaluated positively by users. In Pelotas, the lower the user satisfaction with the appearance of the city centre, the higher the importance attributed to the appearance of commercial signs to make this city centre an unattractive place. It shows that to increase user satisfaction with the historic city centre of Pelotas, commercial signage controls need to be applied to regulate the appearance of shopfronts and window displays and, consequently, reduce visual pollution.

Furthermore, in Gramado, the higher the user perception and evaluation of order among commercial signs, the higher the importance attributed to historic buildings and places in making Gramado city centre an attractive place. This result indicates that when commercial signage is ordered, users tend to focus their attention on historic buildings and places. It is relevant to note that the city centre of Gramado has very few remaining original buildings from the early period of the city, and in this city there are no regulations to protect the historic heritage. Residents recognize the importance of historic buildings and places in making the city centre an attractive place. They also complain about the approach adopted by the local authority that does not protect the historic character of Gramado and, at the same time, promotes a manufactured image of this city as 'the Brazilian Switzerland' through contemporary buildings and design of commercial signs.

City Centre Functions

In the city centres of Oxford and Gramado, where commercial signage controls are applied and the streetscape is ordered, 98.25% (Oxford) and 94.17% of users (Gramado) recognize 'leisure' as a 'very important' and 'important' function of these centres. At the same time, the majority of users (96.06%) indicate 'leisure' as a 'very important' and 'important' function of the city centre of Pelotas, where commercial signage controls are not effective and the streetscape is disordered. Different reasons can be attributed to these results, but the conclusion here is that ordered and disordered city centres can both be perceived as places of 'leisure'.

The findings from the cities of Oxford and Gramado can be explained by the literature review, which indicates that places evaluated as positive by their residents tend to be used as places of leisure. Taking the findings from Pelotas into consideration, the city centre is perceived as a place of leisure because it provides

types of entertainment (such as cinemas, museums, theatres, and department stores), which cannot be found in other areas of this city. Consequently, even with several historic buildings harmed by commercial signs, this city centre still attracts people because of the activities and services that it offers.

Two opposite findings are verified in terms of the importance attributed by residents to city centre functions and user satisfaction with city centre appearance. In Oxford, the higher the user satisfaction with the city centre appearance, the higher the importance attributed to this area as a place of 'leisure'. At the same time, in Pelotas, the lower the user satisfaction with the city centre appearance, the higher the importance attributed to this area as a place of 'leisure'. Leisure is still an important city centre function even in places evaluated negatively in terms of appearance. In Gramado, there is no correlation between these two issues but frequencies of user responses indicate that: the majority of users who evaluate Gramado city centre as 'very beautiful' and 'beautiful' (86.67% of users) indicate 'leisure' as a 'very important' and 'important' city centre function (80.83% of users).

In Oxford, where the appearance of commercial signs is controlled in order to protect the historic heritage, the higher the influence of the appearance of commercial signs and historic buildings and places on user satisfaction with this city centre, the higher the importance attributed to 'leisure' as a city centre function. In Pelotas, where commercial signage is disordered and historic buildings are harmed by these media, the higher the influence of the appearance of commercial signs on user satisfaction with this city centre, the lower the importance attributed to 'leisure' as a city centre function. These results show that user perception and evaluation of city centres as places of 'leisure' (i) can be increased by the presence of commercial signs when these media do not harm historic buildings and places, and (ii) can be decreased by commercial signs when these media harm the streetscape. The findings also indicate that in Pelotas other factors are responsible for increasing the importance of this city centre as a place of 'leisure'. As explained previously, the concentration of activities in this centre, which cannot be found in other areas of the city, is likely to be another factor.

User responses indicate that, in Oxford, the majority of users who agree that the commercial signage is 'very ordered' and 'ordered' indicate 'leisure' (56.14% of users) as a 'very important' and 'important' city centre function. In Gramado, the majority of respondents who perceive and evaluate the commercial signage as 'neither ordered nor disordered' evaluated 'leisure' (60% of users) as a 'very important' and 'important' city centre function. At the same time, in Pelotas, the lower the user perception and evaluation of order among commercial signage, the higher the importance attributed to 'leisure' as a city centre function. Users who indicated 'leisure' as a 'very important' and 'important' function sum up commercial signage in Pelotas as 'very disordered' or 'disordered' (86.61% of users). These findings show that a relationship between order among commercial signs and function of city centres as places of 'leisure' can exist when shopfronts and window displays are disordered. This can be related to what mentioned earlier:

in the city centre of Pelotas there is a concentration of activities related to 'leisure' that cannot be found in other areas of this city.

City Centre Image

City centres, where different commercial signage approaches are applied, have different images according to residents in their cities. Images promoted by the local authority of Oxford and Gramado, through the application of marketing the city and urban tourism strategies and aesthetic controls, are perceived by residents in these cities. The city centre of Oxford, where commercial signage controls aim to protect the historic character and the local authority is involved in promoting this area as a historic and tourist place, is mentioned by the majority of residents as a historic (98.24% of users), commercial (92.98% of users), tourist (89.47% of users) and cosmopolitan centre (52.63% of users). This last function can be related to the cosmopolitan character of Oxford population. There are several international students that live in the city and come to Oxford to study in the University of Oxford and Oxford Brookes University.

The city centre of Gramado, where commercial signage controls aim to order commercial street facades and reinforce the character of the city promoted as a tourist destination, is mentioned by the majority of residents as a commercial (94.17% of users) and tourist centre (92.50% of users). This result is the reflection of the approach adopted by the City Council that does not protect the historic heritage.

The city centre of Pelotas is recognized by the majority of its residents as a commercial (96.85% of users), historic (81.89% of users) and tourist centre (52.75% of users). Even with the majority of historic buildings significantly harmed by commercial signs, this city centre is still recognized by residents as a historic and tourist place. These results suggest that there is high potential for this area to become a prosperous historic site and tourist attraction.

Differences are found between residents in Oxford, Gramado and Pelotas in terms of the perception they have of the image of the city centre in their cities: (i) the city centre of Oxford is perceived as more historic and cosmopolitan than the city centres of Gramado and Pelotas, (ii) the city centre of Oxford is perceived as more tourist-focussed than the city centre of Pelotas, and (iii) the city centre of Pelotas is perceived as more historic and less tourist-focused than the city centre of Gramado.

In Oxford and Gramado, where commercial signage controls are effective and the streetscape is ordered, the majority of residents agree that the commercial signage is a positive element to the city centre image. At the same time, in Pelotas, where commercial signage controls are ineffective and the streetscape is disordered, the majority of users evaluate the commercial signage as a negative element to the city centre image. The commercial signage in Oxford is evaluated as more positive than the commercial signage in Gramado and Pelotas, and the commercial signage in Pelotas is evaluated as more negative than the commercial signage in Oxford and Gramado. These results correspond with the views of the

City Council officers who were asked about the influence of these media on the image of the cities during the interviews.

In this regard, the way that commercial signage controls are approached influences user perception and evaluation of the effect of these media as positive or negative elements to the city centre image. The results also show that user evaluation of commercial signage as a positive or negative element of the city can be influenced by how the local authority deals with shop owners who do not respect commercial signage controls. In Pelotas the local authority does not have any control over irregular signs, in Gramado some irregular signs in the city centre have been found because the City Council has been unsuccessful in convincing a few shop owners to respect the legislation; on the other hand, in Oxford irregular signs have not been found because the City Council has total control over irregular signs.

Wayfinding

Commercial signs help wayfinding even in city centres where these media are disordered. As already presented in Chapter 1, wayfinding is the user experience of orientation and choosing a path within a place, with regard to a set of architectural and design elements that may influence orientation. The majority of residents in Oxford (77.19% of users), Gramado (55.83% of users) and Pelotas (54.33% of users) mention that commercial signage helps them to navigate through the city centre of their cities. However, the commercial signage in the city centre of Oxford helps wayfinding more than it does in the city centres of Gramado and Pelotas. These results indicate that commercial signs will help users to navigate through city centres more in places where these media are higher ordered. In Oxford city centre, the commercial signage is ordered, while in Gramado city centre few irregular signs can be seen, and in Pelotas city centre these media are completely disordered.

There is a significant relationship between user satisfaction with the appearance of city centres, and user perception and evaluation of commercial signage as an element that helps wayfinding in these places. In Oxford and Gramado, the majority of residents who agree that commercial signs help their wayfinding evaluate the city centre as 'very beautiful' and 'beautiful' (Oxford: 62.28% of users; Gramado: 52.5% of users). On the other hand, in Pelotas, the majority of residents who say that commercial signage helps their navigation through the city centre evaluate the appearance of this place as 'neither beautiful nor ugly' (26.77% of users), 'ugly' and 'very ugly' (24.41% of users). These results show that in city centres where commercial signage controls are applied and the streetscape is ordered (Oxford and Gramado), users who agree that commercial signage helps their wayfinding are satisfied with the appearance of the city centre. On the other hand, in a city centre where commercial signage controls are inefficient and the streetscape is disordered (Pelotas), users who agree that commercial signage helps their wayfinding are not satisfied with the appearance of the city centre. In this

regard, even in places evaluated as negative in terms of appearance, commercial signage is recognized as an element that helps users' spatial orientation.

There is a significant relationship between user perception and evaluation of commercial signage as an element that helps wayfinding in city centres, and user perception and evaluation of order among commercial signs. In Oxford, the majority of residents who agree that commercial signage helps their wayfinding (77.19% of users) sum up these media as 'very ordered' and 'ordered' (49.13% of users). In Gramado, residents who mention that commercial signage helps their wayfinding (55.83% of users) are divided between those who sum up these media as 'very ordered' and 'ordered' (24.17% of users), and 'neither ordered nor disordered' (29.17% of users). On the other hand, in Pelotas, the majority of residents who agree that the commercial signage helps their wayfinding (54.33% of users) evaluate these media as 'disordered' and 'very disordered' (47.24% of users).

The findings from the city of Oxford indicate that ordered commercial signs help user's navigation through the city centre. On the other hand, the results from Gramado show that ordered commercial signs are not a guarantee that these media will help wayfinding, as 44.17% of residents in this city say that these signs do not help their spatial orientation in the city. At the same time, disordered commercial signs do not necessarily hinder people's spatial orientation, as 54.33% of residents in Pelotas agree that these media do help their wayfinding. In summary, others aspects of the built environment, such as focal points of attention or urban morphology may be involved on users' wayfinding more than the design and order of commercial signs.

Conclusion

The findings from this chapter indicated eight main aspects of the operation of commercial signage controls that should be taken into account in the development of a general commercial signage approach applicable to historic city centres of different urban contexts:

1. Protection of historic buildings and places and promotion of commercial appearance of historic city centres: the protection of historic buildings and places should be the priority of commercial signage controls applied in historic city centres. Based on the perception and evaluation of users from the three case studies, commercial signs reinforce the commercial appearance of places even in city centres where commercial signage controls are applied to protect the historic heritage. This fact indicates that a general commercial signage approach should recommend that controls and guidance be designed to (i) protect the historic character of places and, at the same time, (ii) reinforce the commercial image of historic city centres in a positive manner. The results demonstrate that to reinforce the commercial appearance of historic centres is not considered to be something that is negative by users, as it does not decrease user satisfaction with the appearance

of these places. The findings support what was discussed in the literature review: commercial signs are important elements in the contemporary streetscape, and they are recognized as such by users from different urban contexts. The challenge facing local authorities is to handle pressures between commercial interests and preservation of historic heritage in order to create places perceived and evaluated positively by different users.

2. *Political context*: the implementation of a national commercial signage approach is fundamental in countries like Brazil, where every time a new local authority is elected, laws implemented by the previous administration are usually modified or forgotten. This happens because of different political views, interests, and political ideologies between parties. A national approach can ensure the adoption of commercial signage controls by local authorities from distinct political parties providing a long term commitment. Every City Council would be responsible for the application of commercial signage controls in order to protect the historic heritage, and avoid visual pollution in historic cities. The positive example verified by the city of Oxford, as well as the other cities discussed in Chapter 4 (Leeds, Dartmouth, Exeter, Bath and York) demonstrate that a national commercial signage approach helps local authorities to design and apply shopfront and advertisement controls.

3. *Public participation*: a general commercial signage approach should include the participation of the local community in the development of commercial signage controls. As shown in this chapter, users from different countries and cities where different commercial signage approaches are applied would like to be consulted when these controls are being developed. As supported by the literature review, users who participate in the development of commercial signage controls tend to get involved in the process of implementation of these regulations, helping the local authority to identify irregular signs in the city centre. In Oxford and Gramado, for example, local people are consulted during the development of commercial signage controls, and later they help the City Council to identify shop owners who do not comply with these regulations. On the other hand, in Pelotas, where the local community is not consulted during the process of the development of commercial signage controls, residents are not committed to supporting these regulations. This chapter highlights that the dialogue between local authority and local community is essential for the successful implementation of any aesthetic control.

4. *Persuading shop owners to support commercial signage controls*: three initiatives are recommended here to persuade shop owners to support commercial signage controls – (i) public meetings open to members of the local community, City Council officers, and shop owners to discuss commercial signage controls, (ii) election of a mediator, who could be a link between shop owners and the local authority, in order to reach agreement related to commercial activities and preservation of historic heritage, and (iii) definition of a pilot area in the city centre to test commercial signage guidelines. This last initiative could help shop owners, and other groups in society, evaluate the improvement of the appearance of

commercial streetscapes through the application of commercial signage controls on-site.

5. *Guidelines described in objective terms*: commercial signage guidelines should regulate physical characteristics of signs, such as 'size', 'proportion', 'colour' and 'materials', through objective terms. Subjective expressions such as 'harmonious shopfronts' and 'signs should be adequate for building facades' should not be included in commercial signage controls. Subjective expressions lead to ambiguous regulations because, for example, signs evaluated as 'harmonious' by some users can be evaluated as 'not harmonious' by others. In the city of Pelotas, the definition of what is an 'adequate' shopfront in the central area depends on the individual interpretation of each planning officer because of the subjective expressions applied in the current commercial signage regulation. This problem is also identified in aesthetic controls applied in the United States as discussed in Chapter 1.

6. *Planning applications to install new commercial signs*: shop owners should need to apply for permission of the local authority to install any kind of commercial signage in historic city centres. As a result, City Council can determine whether the new media are appropriate in regard to the historic context of each city. A general commercial signage approach can recommend that physical aspects of new commercial signs, such as size, shape, proportion, colour, text fonts, materials, relationship with surrounding areas and between sign and building facades, be described and illustrated in planning applications. This kind of recommendation is already implemented by the City Councils of Oxford and Gramado; however, in Pelotas this control is usually not required by the local authority. As a result, the visual pollution of this historic city is an increasing problem.

7. *Commercial signage approaches working with marketing the city and urban tourism strategies*: commercial signage controls should be designed to promote the city centre image that residents desire to see. Then, this image can be reinforced by the local authority through marketing the city and urban tourism strategies. In this regard, commercial signage controls need to be designed partly as a tool to promote the desired city centre image, and help shop owners to understand what commercial signage designs will work to reinforce this image. In the cities of Oxford and Gramado, commercial signage controls and marketing the city strategies are approached to promote these cities as tourist destinations attracting visitors, potential residents and investors. This kind of approach has already been discussed in Chapter 2, where initiatives implemented by the local authorities of Rio de Janeiro, Sao Paulo, Sao Luiz and Salvador in Brazil were analysed. In addition, the findings from Oxford show that marketing the city and urban tourism strategies can influence the design and control of commercial signs with particular focus on the preservation of historic heritage. The image promoted by marketing strategies in historic city centres needs to emphasize the historic appearance of these places, and not just its commercial function.

8. *Local guides describing how commercial signs need to be designed*: a general commercial signage approach should recommend that each historic city has a local

guidance document that explains how commercial signs ought to be designed to preserve the visual quality and historic character of the place. This guide should be designed by the local authority with the involvement of the local community, civic societies, and private sectors. This guidance could help shop owners to understand how to design commercial signs in accordance with local legislation. In this guide, illustrations showing how a street facade in the city centre would look after the implementation of commercial signage controls could be used as a tool to convince shop owners to support regulations related to shopfronts and window displays. In Oxford, there is a short guide that helps shop owners to design commercial signs. In England there is a national guide called 'Outdoor advertisements and signs: a guide for advertisers' published on June 2007 by the Department for Communities and Local Government. This guide aims to explain to everyone who wants to display an outdoor advertisement how the system of advertisement control works in England.

Taking into account the issues presented above as a theoretical background for the operation of commercial signage controls in historic city centres, the main findings from user evaluation of commercial signage controls and their effects on historic city centres are highlighted in the next paragraphs.

The findings in this chapter showed that a general approach to controlling commercial signage should take into account the fact that users from the three cities studied, where different commercial signage control approaches are applied, agree that: (i) commercial signage controls are necessary in historic sites, (ii) they would like to participate in the development of these controls, and (iii) they believe that appearance of buildings and commercial signs, historic buildings and places, and number of commercial signs are relevant issues in the design of these controls. The findings also demonstrate that user urban context influence user perception and evaluation of the aspects that should be considered in the development of commercial signage controls. In this regard, a general commercial signage approach should recommend that local authorities first need to investigate which physical aspects of the streetscape need be taken into account in the development of local commercial signage controls with regard to the perception and evaluation of local residents.

Different commercial signage approaches clearly influence user perception and evaluation of city centre appearance, city centre image, and wayfinding through commercial signage. The findings in this chapter prove that the application of commercial signage controls improve the appearance of city centres, as user satisfaction with the appearance of these places is higher when these controls are effective. As discussed in the literature review (see Chapter 1) and supported by the results presented here, one way to increase user satisfaction with historic city centres is to promote order among signs. The findings also show that commercial signs are such important features in historic centres that even in places where visual pollution is a problem, these media help wayfinding. However, these media will help users to navigate through their city centres in places where commercial signs are ordered more than in places where they are disordered.

Historic city centres offer a variety of activities, which are usually not found in other areas of the city. Findings from the city of Pelotas indicate that this fact

contribute to making historic city centres become recognized as places of 'leisure' even when visual pollution is a problem. This fact reinforces the importance of social and economic functions of these areas, and the potential of these places in becoming pleasant leisure centres according to the perception and evaluation of residents. As shown by the literature review (see Chapter 2), users prefer to go to places where the appearance is evaluated positively. In this regard, a general commercial signage approach can help to improve the appearance of historic city centres, which are already recognized as areas of leisure.

The way that commercial signage controls are approached can influence how users sum up city centre images. Oxford city centre, where commercial signage controls aim to protect the historic heritage and the City Council is involved in promoting this area as a historic and tourist place, is recognized as a historic, commercial, tourist and cosmopolitan centre by users. Moreover, Gramado city centre, where commercial signage controls ignore the importance of historic heritage, is not recognized as historic. According to its residents, the city centre is a commercial and tourist area reflecting the aims of the commercial signage control approach adopted by the local authority.

When the appearance of Gramado city centre is evaluated, historic buildings and places influence user satisfaction. This result shows that a commercial signage approach, which takes into account the protection of historic heritage, should be adopted in this city, as it has a significant influence on resident satisfaction with the appearance of the city centre. At the same time, Pelotas city centre, where the streetscape is harmed by commercial signs, is recognized as a commercial, historic and tourist centre by users. Even with the majority of historic buildings significantly harmed by commercial signs, this city centre is still perceived as a historic and tourist place. These findings support the idea that a general commercial signage approach should emphasize the importance of protecting historic buildings and places, in order to avoid replacing the historic character of city centres with manufactured images, which simply reflect commercial and tourist interests.

The discussions presented in this chapter prove that the application of effective commercial signage controls (i) results in commercial signage that is perceived and evaluated as a positive element of historic city centre images, (ii) increase user satisfaction with the appearance of historic city centres, (iii) make the appearance of buildings and the historic buildings and places be perceived and evaluated as positive elements of historic city centres, and (iv) stimulate users to perceive and evaluate the appearance of buildings and the historic buildings and places as important elements in making historic city centres attractive places. The findings also show that effective commercial signage controls contribute in making (i) buildings and commercial signs become points of visual reference in historic city centres, helping wayfinding, and (ii) city centres attractive places. In this regard, the design and implementation of a general commercial signage approach for historic city centres can help to increase positively user perception and evaluation of the appearance of commercial signs, and user satisfaction with the appearance of historic city centres.

The next chapter explores whether users from different urban contexts have similar preferences and levels of satisfaction with the appearance of commercial streetscapes.

Chapter 6

User's Preference and Satisfaction with Historic Streetscapes

This chapter is divided into two main sections. The first presents results related to user preferences for commercial street facades, user satisfaction with the appearance of these streets, user choices for the best and the worst commercial streets in terms of appearance, and user evaluation of physical features of those streets that influence users' choices. The second discusses perception and evaluation of residents in the city where the streets chosen as the worst in terms of appearance are located. To conclude, it highlights the characteristics of the commercial signage controls applied in the streets evaluated positively and negatively by users from the different urban contexts. Proposals to reduce visual pollution in historic city centres are discussed.

To confirm the validity of the results presented in this chapter, user evaluation of commercial streets observed on-site (Sample A), and user evaluation of the same commercial streets observed through colour photomontages (Sample B) were compared. The analysis was based on the comparison between the mean score values, and the frequencies of user responses. The outcomes demonstrated that colour photomontage serves as an adequate substitute to analyse perception and evaluation of users from different urban contexts, when the appearance of commercial and historic streetscapes are studied. These findings agree with earlier studies of Stamps and Miller (1993), Stamps (1993), and Sanoff (1991). The results indicate that the majority of users from both samples have similar responses in relation to: (i) the appearance of commercial streets, (ii) those factors that influence their evaluation of the appearance of these streets, (iii) beauty, interest, order, colour, and complexity in relation to commercial streets, (iv) number of commercial signs and the coverage of buildings by these media, (v) number of buildings harmed by commercial signs, (vi) variation of commercial signs and buildings, (vii) influence of commercial signs on the appearance of historic buildings, and (viii) relationship between commercial signs and building form.

Studying User's Preference

Taking into account answers of all respondents who participate of the empirical investigation, the highest user preference is related to the appearance of streets 1 and 2, both located in Oxford (see Figure 6.1). In these streets commercial signage



Figure 6.1 Streets 1 and 2, respectively, in Oxford city centre (Source: author)

controls are applied in order to preserve the historic heritage and the streetscape is ordered. Street 1 has high complexity, whilst street 2 has the second lowest complexity when compared to the streets in the sample. In addition, street 1 has 2.70% of the street facade covered by commercial signs, and 0.31 square metres of commercial signs per linear street metre, and street 2 has 5.62% of the street facade covered by commercial signs, and 0.68 square metres of commercial signs per linear street metre. As a result, high or low complexity when associated with ordered streetscape is a positive aspect of commercial street facades, and a maximum of 5.62% of a street facade covered by commercial signs, and a maximum of 0.68 square metres of commercial signs per linear street metre are features of commercial streets perceived and evaluated in a positive way by users from different urban contexts.

Streets 5 and 6 are ranked as the most negative street facades in terms of appearance by the majority of users from the whole sample (see Figure 6.2). Both these streets are located in Pelotas, where commercial signage controls are ineffective and historic buildings are harmed by shopfronts and window display. These streets have a low final level of commercial signage and building variation when compared to other streets in the sample. Moreover, street 5 has 11.31% of the street facade covered by commercial signs, and 0.85 square metres of commercial signs per linear street metre, while street 6 has 9.11% of the street facade covered by commercial signs, and 1.00 square metres of commercial signs per linear street metre. As a result, low variation of commercial signs and buildings when associated with visual pollution is a negative aspect of commercial streets, and a minimum of 9.11% of a street facade covered by commercial signs, and a minimum of 0.85 square metres of these media per linear street metre are features of commercial streetscapes perceived and evaluated in a negative way by users from different cities.

When analysing residents' responses of each city individually, the commercial street facades located in Oxford (streets 1 and 2) are ranked as the best streets by users from Oxford and Pelotas. Street 3, located in Gramado where commercial



Figure 6.2 Streets 5 and 6, respectively, in Pelotas city centre (Source: author)



Figure 6.3 Street 3 in Gramado city centre (Source: author)

signage controls are effective and designed to reinforce the visual character of the city as the 'Brazilian Switzerland', is ranked as the best street by residents in this city (see Figure 6.3), while street 1 is put in second place as the best street by them.

The results also show that: (i) users from Pelotas prefer streets 2 (located in Oxford) and 6 (located in Pelotas), (ii) users from Oxford prefer streets 1 (located in Oxford) and 5 (located in Pelotas), and (iii) users from Gramado prefer streets 3 and 4 (located in Gramado). Familiarity with the streetscape and symbolic meanings attributed to buildings can be influencing responses of residents, when the appearance of the streets located in their cities is evaluated. Many people in Gramado mentioned that two buildings in street 3 are culturally and historically important to the city. This is because one is the main theatre of the city, where national and international events are organized every year, and the other is a building dating from 1954, year when Gramado was recognized as a city (see Figure 6.4). This last building suffered some alterations, such as removal of original doors and windows, but the main structure is still preserved. Users from Gramado mentioned that these were the reasons for them preferring street 3. However, in 2012 the second building was put down to be built a shopping arcade (see Figure 6.5).

This study also indicates that user urban context influence user preferences for commercial street facades. The majority of streets in the city centre of Pelotas combine historic and ordinary buildings, but usually the former are harmed by the latter. As a result, the aesthetic composition of street 2, where commercial signs and ordinary buildings do not harm historic building facades, can be the reason



Figure 6.4 Important buildings in street 3 according to residents: the main theatre of the city; and an original building dated from the city foundation, respectively (Source: author)

why users from Pelotas evaluate this street in a positive way. Moreover, they prefer street 2 because it represents an example of how historic buildings, ordinary buildings and commercial signs can coexist without visual pollution. In addition, users from Oxford, where the streetscape is characterized by preserved historic buildings, tend to evaluate street facades where historic buildings characterize the streetscape more positively than users from the other cities, even when these buildings are harmed by commercial signs.



Figure 6.5 Shopping arcade built in 2012 to replace an original building dated from the city foundation and recognized by residents as important (Source: author)

The results from the analysis of preferences of lay people and professionals show that the appearance of the commercial streets in Gramado is more popular with lay people than with professionals. The Alpine visual character of the streetscape in Gramado is more accepted by lay users. This can be the reason that makes Gramado such a popular national tourist destination in the perception of many tourists across Brazil and South America (Daros & Barroso, 1995). On the other hand, professionals tend to prefer the appearance of streets characterized by historic buildings, even when these buildings are harmed by visual pollution.

Studying User's Satisfaction

The majority of people who participate in this survey 'really like' and 'like' streets 1, 2, 3 and 4, in this particular order. At the same time, they 'do not like' and 'really do not like' streets 6 and 5, in this particular order. The highest user satisfaction is related to the appearance of street 1, while the lowest user satisfaction is related to the appearance of street 6.

The physical aspects of the streetscape that influence user satisfaction with street 1 can be related to the commercial signage approach adopted in Oxford,



Figure 6.6 Identification of a well preserved historic building in street 5, located in Pelotas (Source: author)

which is designed to protect the historic heritage of the city centre. Moreover, users like this street because it has the lowest percentage of street facade covered by commercial signs (2.70%) when compared to the other streets in the sample, and only 0.31 square metres of commercial signs per linear street metre. Associated with these characteristics, the combination of ordered streetscape, high complexity and preserved historic buildings can be increasing user satisfaction. The results related to user satisfaction with streets 5 and 6, located in Pelotas, indicate that visual pollution caused by signage decreases satisfaction of users from different urban contexts. At the same time, the following characteristics of street 5 can be increasing user satisfaction with this street, when compared to street 6: similarity in building heights, lower variation of commercial signs and buildings, and presence of a well preserved historic building in the middle of the street facade (see Figure 6.6). In addition, the fact that street 6 has the second highest percentage of street facade covered by commercial signs (9.11%) and the highest square metres of signs per linear street metre (three times more than street 1) when compared to the other streets in the sample is decreasing user satisfaction with this street more than the combination of the physical characteristics identified in street 5.

Taking each city individually, the highest user satisfaction is noted with (i) street 1 by users from Oxford, (ii) street 3 by users from Gramado, and (iii) street 2 by users from Pelotas. As discussed earlier, these can be related to user familiarity with the streetscape, symbolic meanings attributed to buildings, or user urban context. On the other hand, in the three cities, the lowest user satisfaction is associated with the appearance of street 6. The findings also show that: users from Oxford evaluate streets 5 and 6 more positively than users from Gramado; users from Gramado evaluate streets 3 and 4 more positively than users from the other cities; and users from Pelotas evaluate street 2 more positively than users from Oxford. Again, the results can be related to user familiarity with the streetscape and symbolic meanings attributed to buildings when residents in Gramado evaluated streets 3 and 4 (both located in Gramado), and user urban context when residents in Pelotas evaluated street 2 (located in Oxford), and residents in Oxford evaluated streets 5 and 6 (located in Pelotas). In this last case, users from Oxford, where the streetscape is characterized by historic buildings, tend to evaluate streets 5 and 6 characterized by historic buildings more positively than users from the other cities. Moreover, users from Pelotas, where the majority of streetscapes comprised historic and ordinary buildings, tend to evaluate street 2, composed of historic and ordinary buildings, more positively than users from the other cities.

Similar results relating to the study of user preferences are found when lay people and professionals satisfaction is analysed. The findings indicate that the appearance of the street facades located in Gramado is more popular with lay people than with professionals. When questionnaire was being filled out, lay users mentioned order among commercial signs and the 'Neo-Bavarian' architectural style of the buildings as positive elements, while professionals tend to note the aesthetic composition of historic buildings as positive elements.

The Best Commercial Streetscapes

A significant number of users chose street 1 as the best street in terms of appearance; at the same time, users from Gramado and Pelotas are divided among those who chose streets 2 or 3. As discussed earlier, user familiarity with the streetscape and symbolic meanings attributed to buildings can be influencing perception and evaluation of users from Gramado when street 3 is evaluated, while user urban context can be influencing perception and evaluation of users from Pelotas when street 2 is evaluated (see Table 6.1).

Some differences are found between users from Oxford, Gramado and Pelotas in terms of perception and evaluation of the streets they like the most. While the majority of respondents from Oxford chose street 1 as the best street, users from Gramado are divided between streets 1 and 3, and users from Pelotas are divided between streets 1 and 2. The influence of the commercial signage control approaches adopted in Oxford and Gramado on the appearance of commercial streets can be related to user choices for streets 1, 2 and 3 as the best streets in terms of appearance. At the same time, other factors can be influencing user perception and evaluation. In this regard, the following combinations of physical characteristics of those streets can be affecting user responses:

Table 6.1 Commercial street facades chosen as the best in terms of appearance

The street that you LIKE THE MOST is:	Streets	The whole sample	Oxford	Gramado	Pelotas
	Street 1	153(42.38%)	72(63.16%)	39(32.50%)	42(33.07%)
	Street 2	74(20.50%)	10(8.77%)	19(15.83%)	45(35.43%)
	Street 3	106(29.36%)	28(24.56%)	51(42.50%)	27(21.26%)
	Street 4	25(6.93%)	4(3.51%)	10(8.33%)	11(8.66%)
	Street 5	3(0.83%)	0	1(0.83%)	2(1.57%)
	Street 6	0	0	0	0
	Total	361(100%)	114(100%)	120(100%)	127(100%)



Figure 6.7 Vegetation in front gardens or attached to facades is a common feature in street 3, located in Gramado (Source: author)

When compared to the other street facades, street 1, chosen as the best street in terms of appearance by 153 users from the whole sample, has (i) the highest final level of complexity when compared to streets 2 and 3, (ii) the largest number of historic buildings not harmed by commercial signs, (iii) the lowest percentage of street facade covered by signs (2.70% of the street facade), (iv) the second lowest value of square metres of commercial signs per linear street metre ($0.31\text{m}^2/\text{m}$), and (v) the highest variation of commercial signs. The buildings in this street are classified as Medieval and Tudor, Building stones, Georgian and Art deco; they have three and four stories, flat and hip roof, and 50% of them are symmetrical.

When compared to the other streets in the sample, street 3, chosen as the best street in terms of appearance by 106 users from the whole sample, has (i) a high final level of complexity, (ii) the second lowest percentage of street facade covered by commercial signs (3.48% of the street facade), (iii) the lowest value of square metres of commercial signs per linear street metre ($0.25\text{m}^2/\text{m}$), and (iv) a high variation of commercial signs. The majority of buildings in this street are classified as 'Neo-Bavarian' architectural style; they have one and two storeys, the most of them have hip roofs with gable, and 70% are symmetrical and partially symmetrical. Furthermore, vegetation in front gardens and attached on building facades as decoration differentiates this street from the others in the sample (see Figure 6.7).

Street 2, chosen as the best street in terms of appearance by 74 users from the whole sample, has (i) the second lowest final level of complexity, (ii) the second



Figure 6.8 Street 2 in Oxford city centre comprises historic buildings and a modern building (building 6). It is the main difference between the visual character of this street and street 1, also in Oxford (Source: author)

largest number of historic buildings not harmed by commercial signs, (iii) the third lowest percentage of street facade covered by commercial signs (5.62% of the street facade), (iv) 0.68 square metres of commercial signs per linear street metre, and (v) the second highest variation of commercial signs when compared to the other streets in the sample. The visual character of this street is very similar to the street 1; however, the main difference between these streets lies in the presence of a modern building in street 2 (see Figure 6.8). Some users, mainly from Pelotas, perceive and evaluate this building as a positive feature of this street. A respondent from Pelotas wrote the following comment on his questionnaire: 'building 6 respects the features of the old buildings in terms of building heights and proportion of windows and doors, helping the preservation of the city centre's history'.

Analysing user choices for the best commercial streets in terms of appearance, the combination of the physical characteristics identified in street 1 is evaluated more positively than the combination of the physical characteristics identified in streets 3 and 2. At the same time, the combination of the physical characteristics identified in street 3 is more popular with users from Gramado, while the combination of the physical characteristics identified in street 2 is more popular with users from Pelotas.

Taking into account the findings from each city, there is a consensus between a significant number of lay people and professionals about the choice for street 1 as the best street in terms of appearance. Street 3 pleases a significant number of lay people, while street 2 pleases a significant group of professionals. According to the responses of users from Oxford, the following differences are found between lay people and professionals in terms of perception and evaluation: the majority of users from both these groups chose street 1 as the best street in terms of appearance (50.98% of lay people; 73.02% of professionals), but a significant group of lay users (37.25% of users) also chose street 3 as the best street in terms of appearance. There is no significant difference between lay people and professionals from the cities of Gramado and Pelotas in terms of perception and evaluation of the commercial streets. In Gramado, a significant number of lay people and professionals chose street 3 (lay people: 46.84% of users; professionals: 34.15% of users) and street 1 (lay people: 36.71% of users; professionals: 24.39% of users)

as the best commercial streets. In Pelotas, a significant number of users from both these groups chose street 1 (31.58% of lay people; 35.29% of professionals) and street 2 (30.26% of lay people; 43.14% of professionals) as the best streets in terms of appearance.

The Worst Commercial Streetscapes

The majority of users from the whole sample (361 users) chose street 5 and street 6 as the worst streets in terms of appearance. The majority of people from Oxford and Gramado, and a significant number of respondents from Pelotas chose street 6 as the worst street in terms of appearance. At the same time, the largest number of users from Pelotas, and a significant number of respondents from Gramado chose street 5 as the worst street (see Table 6.2).

Table 6.2 Commercial street facades chosen as the worst in terms of appearance

The street that you LIKE THE LEAST is:	Streets	The whole sample	Oxford	Gramado	Pelotas
	Street 1	0	0	0	0
	Street 2	0	0	0	0
	Street 3	11(3.05%)	7(6.14%)	1(0.83%)	3(2.36%)
	Street 4	32(8.86%)	14(12.28%)	4(3.33%)	14(11.02%)
	Street 5	149(41.27%)	31(27.19%)	54(45%)	64(50.39%)
	Total	361(100%)	114(100%)	120(100%)	127(100%)

Differences are found between users from Oxford, Gramado and Pelotas in terms of their choices for the worst street facades in terms of appearance. These differences are placed between users from Gramado and Pelotas: street 6 is evaluated more negatively by users from Gramado than by users from Pelotas. Taking into account the responses of residents in Pelotas related to street 6 (located in Pelotas), this study demonstrates that user familiarity with the streetscape and/or symbolic meanings attributed to buildings are influencing user perception and evaluation of the appearance of this street.

In addition, the effects of the commercial signage control approach adopted in Pelotas on the appearance of commercial streets in this city can be influencing user choices for streets 5 and 6 (located in Pelotas) as the worst streets in terms of appearance. In the city centre of Pelotas, commercial signage controls are not applied in practice, visual pollution is a problem, and the streetscape is disordered and characterized by historic buildings harmed by shopfronts and window displays. Comparing user responses with the physical characteristics of streets 5 and 6, the

following combinations of physical aspects are also influencing user perception and evaluation of the appearance of these streets.

When compared to the other streets in the sample, street 6, chosen as the worst street in terms of appearance by 169 users from the whole sample, has (i) a moderate variation of commercial signs and buildings (as a group), (ii) the second largest number of historic buildings harmed by commercial signs, (iii) the second highest percentage of street facade covered by commercial signs (9.11% of the street facade), (iv) the highest value of square metres of commercial signs per linear street metre (1.00m²/m), and (v) the lowest level of variation of commercial signs. The buildings in this street are classified as Eclectic, Contemporary boxes and Art Nouveau; they have one and two storeys, almost all of them have flat roofs, and 63% of the buildings are symmetrical and partially symmetrical.

Street 5, chosen as the worst street in terms of appearance by 149 users from the whole sample, has (i) the lowest variation of commercial signs and buildings, (ii) the largest number of historic buildings harmed by commercial signs, (iii) the highest percentage of street facade covered by commercial signs (11.31% of the street facade), (iv) the second highest value of square metres of commercial signs per linear street metre (0.85m²/m), and (v) the second lowest level of variation of commercial signs when compared to the other street facades in the sample. The visual character of this street is very similar to the visual character of street 6 but the main difference between both these streets lies in the number of storeys; 67% of the buildings in street 6 have two or three storeys, while all buildings in street 5 have one or two stories. In addition, a well preserved historic building in the middle of street 5 can influence users dislike street 6 more (see Figure 6.6). The buildings in street 5 are classified as Eclectic, Contemporary boxes and Art Nouveau, and all of them are symmetrical or partially symmetrical.

Taking into account the results of user choices for the worst commercial streets in terms of appearance, the combination of the physical characteristics identified in street 6 is more negative than the combination of the physical characteristics identified in street 5. This affirmation is based on the fact that a significant number of users from the different cities chose street 6 as the worst in terms of appearance instead of street 5. At the same time, this study indicates that, in general, the physical characteristics of both these streets decrease user satisfaction and, consequently, should be avoided in commercial streetscapes in different urban contexts. There are differences between lay people and professionals from Oxford, Gramado and Pelotas in terms of their choices for the worst commercial street facades. In the three cities, street 6 is chosen as the worst street by more lay people than professionals. As a result, one or more of the following characteristics of street 6 can affect lay users more negatively than professionals in terms of perception and evaluation of the appearance of commercial street facades: (i) high commercial signage variation, (ii) high building variation, (iii) high number of commercial signs, (iv) high percentage of street facade covered by commercial signs, (v) high percentage of buildings harmed by these media, and (vi) high amount of square metres of commercial signs per linear street metre.

What does (or does not) influence User's choice for the Best and Worst Street?

Appearance of buildings and commercial signs, historic buildings, and numbers of commercial signs have a 'very important' and 'important' influence on their choices for streets 1, 2, and 3 as the best commercial street facades in terms of appearance. At the same time, with regard to street 1, there are significant differences between users from Oxford, Gramado and Pelotas in terms of the level of importance attributed to historic buildings and places and number of commercial signs on this evaluation. When the appearance of this street was evaluated, the historic buildings were more important for users from Oxford than for users from Gramado, while the number of commercial signs was more important for users from Gramado and Pelotas than for users from Oxford. These results are related to user urban context: when the appearance of a commercial street is evaluated, historic buildings have more influence on perception and evaluation of users who live in a place where commercial streetscape is characterized by well-preserved historic buildings (Oxford). On the other hand, number of commercial signs has more influence on perception and evaluation of users who live in a country (Brazil) where the majority of historic city centres are harmed by excessive numbers of shopfronts and window displays.

Common views are found between users from the three cities, when street 1 is chosen as the best street in terms of appearance: (i) the appearance of buildings is the most influential aspect on the perception and evaluation of users from Oxford, Gramado and Pelotas, and (ii) the appearance of commercial signs is the third most influential aspect on the perception and evaluation of users from Oxford and Gramado, and the second most influential aspect on the perception and evaluation of users from Pelotas.

With regard to user choices for street 3 as the best street in terms of appearance, the appearance of buildings was more important for users from Gramado and Pelotas than for users from Oxford. These results indicate that the 'Neo-Bavarian' architectural style influences the perception and evaluation of users in Brazil more than in England. Some users from Oxford mentioned that they did not like the appearance of buildings in street 3 because 'they do not look Brazilian' (see Figure 5.3 in Chapter 5). In this regard, the results are related to stereotypical images that these users have of Brazil. As already discussed, once formed, stereotypes are an important category in environmental cognition. Usually, these concepts are resistant to change and supply summaries of an understanding of cities.

When street 3 was chosen as the best street in terms of appearance, the following factors had influence on the perception and evaluation of users from Oxford, Gramado and Pelotas, in decreasing order of importance: (i) number of commercial signs, (ii) appearance of commercial signs, and (iii) historic buildings. This last factor can be related to buildings 1 and 3 mentioned as culturally and historically important by residents in Gramado (see Figure 6.4).

Appearance of buildings and commercial signs, historic buildings, and number of commercial signs have a 'very important' and 'important' influence on users' choices for streets 5 and 6 as the worst commercial street facades in terms of appearance. Number of commercial signs was more important for users from Gramado and Pelotas than for users from Oxford. This result indicates that user urban context influence user perception and evaluation of the appearance of commercial street facades as the number of commercial signs is mainly mentioned by respondents from Brazil, where the majority of historic city centres are harmed by excessive numbers of shopfronts and window displays. On the other hand, appearance of buildings and commercial signs and historic buildings have a similar influence on the perception and evaluation of users from the three cities, when analysing the appearance of streets 5 and 6. These aspects were mentioned by users from Oxford, Gramado and Pelotas in the following decreasing order of importance: appearance of commercial signs, appearance of buildings, and historic buildings.

Visual Pollution in a Focus Group Discussion

The focus group explored the perception and evaluation of residents in the city where the commercial street facades chosen as the worst streets in terms of appearance are located (streets 5 and 6); it was conducted in the city of Pelotas. The theme, and objectives of the focus group discussion, as well as general information about the participants are presented in Table 6.3. All participants were very interested in the discussion, there were no dominant personalities during the debate, and all of them felt comfortable whilst interacting with each other. The involvement of City Council officers allowed a fully understanding about the commercial signage controls already adopted in Pelotas (see Figure 6.9). The support given by the School of Architecture and Urban Planning of the Federal University of Pelotas, and a local newspaper was very important to the organization of this event. An article introducing the study to the local community and persuading residents to participate in the focus group discussion was published.

The participants of the focus group discussion indicate that the relationship between commercial signage and building form in the historic city centre of Pelotas is negative. They agree with the results obtained from questionnaire, which show that users from different urban contexts evaluate the commercial streets located in Pelotas as the worst streets in terms of appearance. The majority of people in the focus group indicate that those evaluations are the result of the lack of control as the City Council does not apply, until now, any penalties to shop owners who do not attend the current commercial signage control.

The City Council officers, who participated in the discussion, mentioned that asking shop owners to remove irregular signs can create 'a heavy atmosphere in the local community' (the same argument was mentioned by Pelotas City Council officers during the interview session). The other participants in the focus group

Table 6.3 The focus group discussion: theme, objectives and participants

FOCUS GROUP DISCUSSION		
THEME	OBJECTIVES OF THE DISCUSSION	PARTICIPANTS
The relationship between commercial signage and building form in the historic city centre of Pelotas.	<p>a. Identify what residents think about the relationship between commercial signage and building form in the historic city centre of Pelotas.</p> <p>b. Identify whether residents agree with the perception and evaluation of users from the other cities about the commercial street facades in Pelotas.</p> <p>c. Identify the factors that contribute to increase visual pollution in the city centre, and what can be done to reduce it.</p> <p>d. Discuss the lack of interest of shop owners in debating the problem of visual pollution.</p>	City Council officers; students of law and architecture; lecturers of law, civil engineer, architecture and edification technician schools; university staff; professionals who have offices and/or offer services in the city centre (such as lawyers, architects, urban planners, philosophers, historian, dentists, agronomists, journalists and so on).

argue that it is just an excuse to not apply in practice commercial signage controls. On the other hand, the officers said that it is difficult to ask shop owners to remove their signs without the support of commercial signage controls, which regulate the physical characteristics of shopfronts and advertisements, such as size, colour and proportion. According to them, planning officers need the support of an effective legislation to approach shop owners; otherwise the decision of what is a 'harmonic' sign becomes a subjective matter. The current commercial signage control applied in Pelotas is described through many subjective expressions such as 'harmony' and 'identity'.

The participants of the focus groups discussion also recognize that the lack of an effective commercial signage approach which controls the physical characteristics of commercial signs is one of the main factors that increase the visual pollution in the historic city centre of Pelotas. According to them, the lack of public meetings, which would allow members of the local community to get involved in the development of commercial signage controls, is another negative aspect of the approach adopted by Pelotas City Council to control shopfronts and window displays.

In addition, the participants highlight that the lack of interest of shop owners in discussing the negative effects that visual pollution causes to the city is one important issue that needs to be addressed by the local authority. As discussed by them, this lack of interest is one of the main reasons that make the implementation



Figure 6.9 **Photographs of the focus group discussion organized in Pelotas.** Photographs and postcards of Pelotas were shown to the participants to activate the discussion (Source: author)

of commercial signage controls difficult in Pelotas. In general, shop owners do not understand that an ordered city centre attract more people, and, consequently, increase their profits. The participants of the focus group believe that it is necessary to convince this user group that ordered commercial signs will improve the appearance of the streetscape, and consequently this improvement will increase the social and economic vitality of the whole city centre. City Council officers said that to persuade shop owners to get involved in the development of the current commercial signage control was one of their aims. However, their initiatives to get these people involved were always ignored by the majority of shop owners. According to these officers, invitation letters and telephone calls inviting shop owners to come to the City Council to discuss the new commercial signage control were not well received by them.

Results from the discussion related to the support material presented to the participants (photographs and postcards of Pelotas city centre) show that residents in Pelotas would like the appearance of the city centre to be similar to the images advertised by postcards. They mentioned that the postcards do not reflect the actual appearance of the city centre of Pelotas. A participant said: 'these media just illustrate a few historic buildings still preserved and do not show the chaos created by commercial signs that is the main characteristic of the city centre at present moment'. Participants recognize that the implementation of an effective commercial signage control is one of the main tools to improve the appearance of the city, and make this place similar to the image promoted by the postcards.

From the discussion relating to what can be done to reduce the visual pollution in Pelotas, eight proposed actions were suggested by the participants (see below). At the end of the focus group discussion, these actions were put into a document, which was sent to the Planning Department of Pelotas City Council.

1. Persuasion of shop owners to support commercial signage controls: shop owners need to get involved in discussions related to (i) problems caused by the visual pollution, and (ii) importance of commercial signage controls as tools to improve the appearance of cities. To get the involvement of these users, three actions were suggested:

a1. Publication of articles in local newspapers, distribution of pamphlets to shop owners, and promotion of debates broadcast on local TV. The objective here is to promulgate negative effects caused by visual pollution, and positive results that ordered commercial signs can bring to historic city centres in terms of tourist and economic development.

a2. Design of a handbook to introduce to local communities main issues taken into account in commercial signage controls designed by local authorities. This type of handbook should be distributed to shop owners and all members of society interested in the subject. In England, there is a print guide, titled 'Outdoor advertisements and signs: a guide for advertisers', which explains the advertisement control system in England. All participants in the focus group agreed that it is a good way to help shop owners to understand the issues taken

into account in commercial signage controls, and what in terms of design does not affect the historic character of places.

a3. Organization of workshops to (i) discuss with shop owners the physical characteristics of commercial signs that should be regulated by commercial signage controls, and (ii) showing, through examples of other cities, that ordered commercial signs improve the appearance of city centres, attract more visitors, and, consequently, increase the social and economic vitality of these places (Portella, 2003; Scenic America, 1999). These meetings can be organized by City Councils and local universities and should be open to all members of the local community, and be advertised by the local media.

2. Application of a commercial signage control approach, which takes into account the character of the whole city centre: a commercial signage control approach, which focuses just on individual buildings and does not take into account their surrounding areas, can be a contributory factor to decreasing the visual quality of historic city centres. This is seen in Pelotas where, even when historic building facades are free of signs, commercial signs on their adjacent buildings harm their appearance. The design of commercial signage controls should take into account character of the whole historic city centres.

3. Use of computer simulations to illustrate how appearance of city centres will be improved with the implementation of commercial signage controls: simulations of street facades showing how appearance of these areas can improve with the implementation of effective commercial signage controls should be printed out in local guides, and distributed to local communities. This kind of visual appeal can persuade shop owners to support commercial signage controls proposed by local authorities.

4. Delimitation of 'street models' in order to test commercial signage controls: implementation of commercial signage controls on one or two street facades can allow shop owners and the local community to evaluate the improvement of appearance of commercial streetscapes on-site. Consequently, shop owners from other streets might want to volunteer to adopt the guidelines proposed by City Council. This action can also help local authority to analyse how shopfronts and window displays can be designed with regard to preservation of historic heritage on-site. The participants of the focus group suggested that these 'street models' should be selected by the City Council with the support of local shop owners. The City Council can give financial support to the shop owners to adapt their commercial signs to the proposed guidelines. In initiatives already implemented to control visual pollution in some Brazilian historic city centres, such as in Rio de Janeiro, the local authority gives exemption of IPUT (equivalent of the Council Tax in England) to owners who agree to restore and preserve the historic character of their properties according to the local commercial signage regulation.

5. Control of physical characteristics of commercial signs and definition of a maximum percentage of building facade covered by these media: commercial signage controls should be designed in order to (i) regulate physical characteristics of shopfronts and window displays (such as size, colour, shape and location on

facades), and (ii) define a maximum percentage of a building facade that can be covered by these media. In this regard, simulations of 3%, 5% and 10% of a historic building facade covered by commercial signs were shown to the participants of the focus group. Looking at these simulations, the majority of people indicated that a maximum of 3% of the building facade covered by these media is the best alternative to historic buildings. However, the current commercial signage regulation designed by the City Council of Pelotas defines a maximum limit of 0.60 square metres of signs per linear meter of building facade, which is more than 10% of a building facade covered by signs. City Council officers presented in the focus group said that a maximum of 3% is the best option; however, they believe that shop owners will not respect this limit; so they increased to 10%. This fact supports what was discussed earlier: the City Council does not have a strong enough position to enforce commercial signage controls to be respected by shop owners. This study recognizes that this attitude affected even the design of the current commercial signage control.

6. Control of the quantity of information displayed on commercial signs: a limit on the amount of information promulgated by commercial signs should be considered in commercial signage controls. The shopfront, for example, should be designed to communicate the name of the shop. Additional information, such as 'here you have the best prices, 'great deals' and 'good value', should not be allowed in shopfronts, and limited in window displays (see Figure 6.10).

7. Fragmentation of building facade by colour and commercial signs should be avoided: fragmentation of building facade by colour and/or commercial signs due to commercial purposes should not be allowed. Usually, when more than one shop is located in one historic building, shop owners in Pelotas tend to divide the building facade into different parts using colours and commercial signs (see Plate 1a and 1b). They believe that it helps consumers identify each shop; however, according to the participants in the focus group, it just contributes to decreasing the visual quality of the building and the historic city centre. The results of the focus group discussion show that colours and commercial signs of different shops located in the same building should be designed as a group. The current commercial signage control in Pelotas bans this kind of colour fragmentation; however there is no control by the City Council to be sure that this policy has been respected.

8. Involvement of local universities in discussions about visual pollution: lectures and informal discussions organized among students and lectures in order to debate the consequences that visual pollution can bring to historic city centres is an initiative that can be promoted by local universities. This kind of discussion can contribute to making students aware about the problem of visual pollution, and pro-active in terms of avoiding this in their future professional projects.



Figure 6.10 Example of where the signage is displayed to advertise the name of the shop, what is offer, and so on. It is a common problem in the city centre of Pelotas, in Brazil. (Source: author)

Conclusion

This chapter presented the findings from the quantitative analysis of questionnaires, and the qualitative analysis of the focus group discussion. The main results are highlighted in the next paragraphs. These are based on the common perceptions and evaluations found between users from different urban contexts.

People from the different cities evaluate negatively the appearance of street facades where commercial signage controls are ineffective and the streetscape is disordered and characterized by historic buildings harmed by commercial signs. On the other hand, they evaluate positively the appearance of street facades where commercial signage controls are applied to preserve the historic heritage and the streetscape is ordered and characterized by preserved historic buildings. A street facade where commercial signage controls are effective and the streetscape is characterized by contemporary buildings is also evaluated positively by people; mainly by residents in the city where this street is located.

Comparing the results from the analysis of user evaluation of the appearance of commercial streets with the physical characteristics of these streets, this chapter shows that: a general commercial signage approach should take into account that the conjunction of the following factors can influence positively preference and satisfaction of users from different urban contexts – (i) a maximum of 5.62% of street facade covered by commercial signs, (ii) a maximum of 0.68 square metres of these media per linear street metre, (iii) ordered commercial signage plus (iv) high or low variation of buildings and commercial signs. At the same time, this approach should take into account that (i) a minimum of 9.11% of a street facade covered by commercial signs, (ii) a minimum of 0.85 square metres of commercial signs per linear street metre, (iii) visual pollution plus (iv) higher or lower variation of commercial signs and buildings are factors associated with street facades evaluated negatively by users from the three case studies.

The results also show that (i) user familiarity with a particular streetscape, (ii) symbolic meanings attributed to buildings, and (iii) user urban context influence user perception and evaluation of the appearance of commercial streets. These three aspects should be considered in the development of a general commercial signage approach to historic city centres. The investigation of how residents evaluate the appearance of commercial streets in historic city centres, with regard to the influence of these three non-physical variables on their responses, should be the first analysis recommended in a general approach to the development of local commercial signage controls.

The findings also identify a series of physical characteristics of commercial streetscapes that influence the perception and evaluation of users from the three cities in the same way as shown below. These characteristics can be used in a general commercial signage approach as potential guidelines to promote commercial streetscapes evaluated positively by users from different urban contexts.

- a. Visual pollution decreases user satisfaction more when associated with a high variation of commercial signs and buildings, a high percentage of street facade covered by commercial signs ($\geq 9.11\%$ of the street facade), a high percentage of buildings harmed by these media ($\geq 33\%$ of buildings or 46% of a street facade), and a high value of square metres of commercial signs per linear street metre ($\geq 0.85m^2$ of signs per linear street metre).
- b. Users who prefer commercial streets characterized by preserved historic buildings do not sympathize with commercial streets characterized by contemporary buildings and commercial signs designed to build a manufactured character of a historic city. In this regard, an approach that aims to promote manufactured visual character should be avoided.
- c. Streetscapes comprising a mix of historic and ordinary buildings influence positively perception and evaluation of users, mainly when ordinary buildings are designed respecting the features of historic buildings, such as their height and proportion of windows and doors.

- d. Users do not like the appearance of street facades characterized by (i) disordered commercial signs, (ii) low variation of commercial signs and buildings, and (iii) historic buildings harmed by these media. In this case, the combination of these features should be avoided in commercial streetscapes.
- e. Combination of a high percentage of street facade covered by commercial signs ($\geq 9.11\%$) and a high percentage of buildings harmed by these media ($\geq 33\%$ of buildings or 46% of a street facade) is evaluated as less negative than a combination of a high value of square metres of commercial signs per linear street metre ($\geq 0.85\text{m}^2$ of signs per linear street metre) and a high variation of buildings and commercial signs. This finding shows that the definition of a maximum square metre of commercial signs per linear street metre, and the design of controls related to the variation of commercial signs and buildings are important issues that should be considered in the development of a general commercial signage approach to historic city centres.
- f. Factors related to the visual character of commercial street facades, such as building styles, roof line, presence of vegetation, and spaces between buildings, seem to influence user perception and evaluation of commercial streetscapes. Therefore, a general commercial signage approach should recommend that, before local authorities begin to design local regulations, they need to evaluate the influence of the current visual character of commercial streetscapes on residents' perceptions and evaluations.
- g. Commercial streetscapes mainly characterized by historic buildings influence user perception and evaluation of these places in a positive way, even when visual pollution is a problem. So, the preservation of these buildings is one of the most important issues that should be considered in the development of commercial signage controls.

The findings in this chapter indicates that a general commercial signage approach should take into account (i) appearance of buildings, (ii) appearance of commercial signs, (iii) historic buildings, and (iv) number of commercial signs as factors that influence perception and evaluation of users from different urban contexts, when the appearance of commercial streetscapes is evaluated. The evidence demonstrates that user urban context influence the importance attributed to these aspects by users, when commercial streets are evaluated. When the appearance of commercial street facades are evaluated, historic buildings have more influence on the perception and evaluation of users from Oxford than on the perception and evaluation of users from the other case studies. This can happen because in Oxford commercial signage controls are applied in order to preserve the historic heritage, and the streetscape is characterized by preserved historic buildings. At the same time, the number of commercial signs has more influence on the perception and evaluation of users from Brazil, where the majority of historic city centres are harmed by an excessive number of shopfronts

and window displays, than on the perception and evaluation of users from Oxford. The perception and evaluation of users from Gramado, where historic buildings are not landmarks in the streetscape due to the aesthetic approach adopted by the local authority, are influenced more by the appearance of commercial signs than by historic buildings.

A general approach to control commercial signage in historic city centres should recommend that, in each particular urban context, specific aspects of the streetscape should be given more emphasis in order to attend to residents' perception needs. Therefore, this chapter recommends that local authorities investigate which physical characteristics of commercial streetscapes most influence perception and evaluation of residents. Having this knowledge as a starting point, local authorities can manage these characteristics to reinforce the historic character of city centres.

The evidence also identifies five factors that can increase visual pollution in historic city centres. These factors can be used in the operation of a general commercial signage approach as negative scenarios that should be avoided by local authorities. This chapter also presented eight proposed actions that, according to user evaluation, can improve the appearance of historic city centres, and convince shop owners and members of local communities to support commercial signage controls (see Table 6.4). These proposals can be used in the operation of a general commercial signage approach as strategies to reduce visual pollution in historic city centres of different urban contexts already affected by this problem.

This chapter found that users from Oxford and Gramado and residents in Pelotas, where commercial signage harms historic buildings and causes disorder, share the same perception and evaluation, when the appearance of the commercial streets in Pelotas were analysed. In this regard, the fact that common views were found between users from these three different urban contexts demonstrates that the development of a general commercial signage approach, which helps national, regional and local authorities of different historic city centres design and implement commercial signage controls, is an essential initiative that should be integrated within urban design approaches.

The next chapter presents the physical characteristics of commercial signs and building facades evaluated positively and negatively by users from different cities and countries.

Table 6.4 Factors related to visual pollution according to user perception

FACTORS THAT CAN INCREASE VISUAL POLLUTION	INITIATIVES THAT CAN DECREASE VISUAL POLLUTION
<ol style="list-style-type: none">1. Legislation too permissive.2. Attitude of the local authority in dealing with the removal of irregular signs.3. Lack of effective commercial signage controls described in objective terms.4. Lack of interest of shop owners in discussing the negative effects that visual pollution is causing to historic city centres.5. Lack of public meetings to allow the local community to get involved in the development of commercial signage controls.	<ol style="list-style-type: none">1. Persuasion of shop owners to support commercial signage controls.2. Application of a commercial signage control approach, which takes into account the character of the whole city centre.3. Use of computer simulations to illustrate how the appearance of the city centre can be improved with the implementation of commercial signage controls.4. Delimitation of 'street models' in the city centre in order to test commercial signage controls.5. Control of physical characteristics of commercial signs and definition of a maximum percentage of building facade that can be covered by these media.6. Control of the quantity of information displayed on commercial signs.7. Avoidance of the fragmentation of building facades by colours and commercial signs.8. Involvement of local universities in discussions about visual pollution.

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Chapter 7

Commercial Signage and Building Design: Positive and Negative Factors

This chapter analyses user perception and evaluation of commercial streets in terms of the aesthetic dimensions of beauty and interest, and the physical aspects of order, colour variation, and complexity. The aim here is to identify if there is a relationship between commercial street facades chosen as the best (streets 1, 2 and 3) and the worst (streets 5 and 6) in terms of appearance and user perception and evaluation of (i) beauty, interest, order, colour and complexity, (ii) variation of commercial signs and buildings, (iii) number of commercial signs and percentage of building facades covered by these media, and (iv) relationship between the aesthetic composition of commercial signage and building facades. Street 4 stays out of this chapter as it was not classified as the best or the worst street by users.

Beauty, Order and Interest

The majority of users evaluate the commercial streets chosen as the best in terms of appearance (streets 1, 2 and 3) as ‘very beautiful’ and ‘beautiful’, and the commercial streets chosen as the worst in terms of appearance (streets 5 and 6) as ‘very ugly’ and ‘ugly’. Resident familiarity with the streetscape is influencing user perception and evaluation of streets 1 and 3: (i) the appearance of street 1, which is located in Oxford, tends to be seen as less beautiful by users from Oxford than by users from the other cities, while (ii) the appearance of street 3, which is located in Gramado, tends to be seen as more beautiful by users from Gramado than by users from the other cities. In addition, the majority of users from Oxford, Gramado and Pelotas classify street 5 as ‘very ugly’ and ‘ugly’ but some respondents from Gramado also tend to evaluate this street as ‘neither beautiful nor ugly’, and ‘very beautiful’ and ‘beautiful’. In this regard, when the questionnaire was being filled in, residents in Gramado mentioned that they like street 5 due to the presence of historic buildings; mainly the well preserved building in the middle of the street facade. This fact shows that users who live in a city where historic buildings are not landmarks, because of the aesthetic control approach adopted by the local authority, tend to value historic buildings of other places, even when the majority of them are harmed by commercial signs.

For the majority of users, the commercial street facades chosen as the best in terms of appearance are perceived and evaluated as ‘very interesting’ and ‘interesting’, while the commercial street facades chosen as the worst are perceived

and evaluated as 'very boring' and 'boring'. There is no difference between streets 1, 2 and 3, and streets 5 and 6 in terms of user perception and evaluation of interest, when the responses of users from the whole sample (361 users) are analysed. At the same time, significant differences are found between responses of users from Oxford, Gramado and Pelotas in relation to street 3: the appearance of this street, which is located in Gramado, tends to be seen as more interesting by users from Gramado than by users from the other cities. In this regard, this results show that resident familiarity with the streetscape also influences user perception and evaluation of interest.

For the majority of users, the commercial streets chosen as the best in terms of appearance are perceived and evaluated as 'very ordered' and 'ordered', while the commercial streets chosen as the worst are perceived and evaluated as 'very disordered' and 'disordered'. There are significant differences between streets 1, 2 and 3 in terms of user perception and evaluation of order, when the responses of users from the whole sample (361 users) are analysed. Street 2 is seen as more ordered than street 1. This result can be related to the final level of complexity of these street facades. According to the method applied in this book to calculate the complexity of commercial streetscapes (see Appendix D), street 1 has higher complexity than street 2. In this sense, the results from user responses agree with the literature review, which says that: high complexity can decrease user perception and evaluation of order. Significant differences are also found between responses of users from Oxford, Gramado and Pelotas in relation to street 1 and street 3. Street 1, which is located in Oxford, tends to be seen as less ordered by users from Oxford than by users from the other cities, while street 3, which is located in Gramado, tends to be seen as more ordered by users from Gramado than by users from the other cities. As verified when user perception and evaluation of beauty and interest were analysed, resident familiarity with the streetscape influences user perception and evaluation of order.

Colour Variation

When compared the responses of users from the whole sample (361 users) related to colour variation, differences are found between streets 1, 2 and 3 (chosen as the best in terms of appearance), and streets 5 and 6 (chosen as the worst in terms of appearance). According to the respondents, street 1 tends to be seen as more colourful than street 2; street 3 tends to be seen as more colourful than street 1 and street 2; and street 5 tends to be seen as more colourful than street 6. The following groups of hues are identified in the streets: (i) blue to purple; (ii) green to yellow green, (iii) yellow to orange, and (iv) brown to red. In terms of colour saturation, colours were divided into dark, medium and light; and in terms of colour temperature, colours were classified as cold and hot. Plate 4a, 4b, 4c illustrate the colour analysis of each commercial street.

The previous analysis of the physical characteristics of the street facades (described in Appendixes B and D) shows that street 2 is the least colourful street when compared to the other streets in the sample; this result converges with the perception and evaluation of the majority of users (54.05%), as they classify street 2 as 'very colourless' and 'colourless'. On the other hand, streets 1 and 3 have similar levels of colour variation according to the previous analysis of their physical characteristics; however, these streets have different levels of colour variation according to user perception and evaluation. Street 1 is evaluated as 'neither colourful nor colourless' by 42.48% of users, and as 'very colourful' and 'colourful' by 30.72% of users, while street 3 is evaluated as 'very colourful' and 'colourful' by 70.75% of respondents. In this regard, these outcomes indicate that the chromatic combination identified in street 3 (yellow-orange hues, hot and medium colours and harmony by light-dark contrast) can increase user perception and evaluation of colour variation, while the chromatic combination identified in street 1 (brown-red hues, hot and light colours and harmony by contrast) can divide users between those who evaluate the streetscape as 'neither colourful nor colourless', 'very colourful', and 'colourful'.

The results related to the streets chosen as the worst in terms of appearance show that street 5 is evaluated as 'very colourful' and 'colourful' (78.52% of users), while street 6 is evaluated as 'neither colourful nor colourless', and 'colourless' and 'very colourless' (56.80% of users). These data converge with the previous analysis of the physical characteristics of these streets, which indicate that street 5 has higher colour variation than street 6. It shows that the chromatic combination identified in street 5 (white and yellow-orange hues, hot and medium colours and harmony by contrast) increase user perception and evaluation of colour variation more than the chromatic combination identified in street 6 (blue-purple hues in cold and light colours, green-yellow hues in cold and medium colours, brown-red hues in hot and light colours and monochromatic harmony).

Analysing and comparing the results from each city, there are significant differences between responses of users from Oxford, Gramado and Pelotas in relation to colour variation in street 1 and street 6. Street 1, which is located in Oxford, tends to be seen as more colourful by users from Oxford than by users from the other cities, while street 6, which is located in Pelotas, tends to be seen as more colourful by users from Pelotas than by users from the other cities. As verified when user perception and evaluation of beauty, interest and order were analysed, this outcome indicate that resident familiarity with the streetscape influences user perception and evaluation of colour variation.

Common views are found between users from Oxford and Gramado in terms of colour variation in street 1: a significant number of users from both these cities evaluate street 1 as 'very colourful' and 'colourful' (Oxford: 36.11% of users; Gramado: 35.89% of users). On the other hand, a significant number of respondents from Pelotas evaluate street 1 as 'colourless' and 'very colourless' (47.62% of users). These results show that user urban context can be influencing perception and evaluation of colour variation. A significant number of residents in Pelotas,

where hot and medium- strong colours are intense in commercial streetscapes (Portella, 2003), tend to evaluate the chromatic combination identified in street 1 (yellow-orange hues, hot and medium colours and harmony by light-dark contrast) as colourless, as they are exposed in their city to a much higher colour variation.

The majority of users from Pelotas and Gramado evaluate street 2 as 'very colourless' and 'colourless'; users from Oxford have different responses, but the sample size (10 users) from this last city who answered this question is not large enough to suggest a new tendency.

There are common views between users from the three cities in terms of perception and evaluation of colour variation in streets 3 and 5. The majority of users evaluate these streets as 'very colourful' and 'colourful'. This result shows that the chromatic combinations identified in street 3 (yellow-orange hues, hot and medium colour and harmony by light-dark contrast) and street 5 (white and yellow-orange hues, hot and medium colour and harmony by contrast) increases colour variation according to the perception and evaluation of users from different urban contexts.

A large group of respondents from Oxford (41.94% of users) agree that street 6 is 'colourless' and 'very colourless'. At the same time, the majority of people from Pelotas (67.39% of users) and a large proportion of users from Gramado (42.62% of users) evaluate this street as 'very colourful' and 'colourful'. These results show that the chromatic combination identified in street 6 (blue-purple hues in cold and light colours, green-yellow hues in cold and medium colours, brown-red hues in hot and light colours, and monochromatic harmony) increases the perception and evaluation of colour variation of users from Brazil more than of users from England. At the same time, user familiarity with the streetscape can be influencing some user responses: street 6, which is located in Pelotas, tends to be seen as more colourful by residents in Pelotas than by residents in Gramado and Oxford.

Levels of Complexity

The commercial streets chosen as the best (streets 1, 2 and 3) and the worst (streets 5 and 6) in terms of appearance are perceived and evaluated as complex or simple; there is not a regular tendency. There are significant differences between streets 1, 2 and 3 in terms of user perception and evaluation of complexity, when the responses of users from the whole sample (361 users) are analysed. Street 2 is evaluated as less complex than street 1: street 1 is evaluated as 'very complex' and 'complex' (49.02% of users), while street 2 is evaluated as 'very simple' and 'simple' (48.65% of users). These results converge with the findings obtained from the application of the method adopted in this book to calculate complexity in commercial streetscapes (see Appendix D), which show that street 1 has the second highest level of complexity and street 2 has the second lowest level of complexity when compared to the other streets in the sample.

At the same time, when comparing the findings obtained from the method applied to calculate complexity and user perception and evaluation of complexity,

a difference is found in relation to the appearance of street 3. According to this method, street 3 has the third highest level of complexity, when compared to the other streets in the sample. However, respondents evaluate this street as 'very complex' and 'complex' (30.19% of users), 'neither complex nor simple' (33.96% of users), and 'very simple' and 'simple' (35.85% of users). Taking into account the physical characteristics of this street, these results show that when a street facade is composed of buildings similar in visual character and architectural style, some users will perceive this similarity as simplicity¹ in terms of street facade. Therefore, street 3 is not evaluated as 'complex' and 'very complex' by the majority of users from the whole sample.

There are no differences between streets 5 and 6 in terms of user perception and evaluation of complexity, when the responses of users from the whole sample (361 users) are analysed. A significant number of these respondents classify both these streets as 'very complex' and 'complex' (36.51% of users in street 5 and 29.58% of users in street 6), 'neither complex nor complex' (38.26% of users in street 5 and 39.05% of users in street 6), and 'simple' and 'very simple'² (25.83% of users in street 5 and 31.36% of users in street 6). The findings from the method applied to calculate complexity (Appendix D) indicate that street 5 has a lower final level of commercial signage and buildings variation than street 6. The results from user perception and evaluation suggest that some physical characteristics of the commercial signs and buildings of streets 5 and 6 balance this difference. Therefore, users classify the level of variation of commercial signs and buildings in both these streets as the same. The outcomes indicate that user perception and evaluation of variation in street 5 is increased because, when compared to street 6, this street has (i) higher commercial signage variation in terms of size, number of chromatic groups, position in relation to facades, size of images, and size of letters, and (ii) higher building variation in terms of fenestration, presence of horizontal and vertical partitions, and colour. On the other hand, user perception and evaluation of variation in street 6 is decreased because, when compared to street 5, this street has (i) lower commercial signage variation in terms of chromatic contrast between letters and sign background, and size of images, and (ii) lower building variation in terms of turns of shape perimeter, overall proportion of windows and doors, articulation, roof line, colour, and facade details.

Moreover, when analysing and comparing each city, significant differences are found between users from Oxford, Gramado and Pelotas in terms of perception and

1 The concept of similarity rests either on exact or approximate repetitions of physical features of buildings. Simplicity refers to lack of variation.

2 As the author did not know which streets would be chosen as the best and the worst in terms of appearance, the scale 'complex/simple' was used in the questionnaire. However, as already discussed earlier, the term 'complexity' is not applied to interpret the findings related to streets 5 and 6. Both these streets are tending to disorder, and order is a prerequisite to complexity. User responses to streets 5 and 6 are interpreted as variation of physical characteristics of commercial signs and buildings.

evaluation of street 1 and street 3. Street 1, which is located in Oxford, tends to be seen as more complex by residents in this city than by residents in Gramado, while street 3, which is located in Gramado, tends to be seen as simpler by residents in this city than by residents in the other case studies. In this regard, as verified when user perception and evaluation of beauty, interest, order, and colour variation were analysed, resident familiarity with the streetscape influences user perception and evaluation of complexity.

A significant number of users from Oxford (61.11% of users) and Pelotas (47.61% of users) evaluate street 1 as 'very complex' and 'complex'. At the same time, 43.6% of users from Gramado and 33.33% of users from Pelotas evaluate this street as 'very simple' and 'simple'. As discussed earlier, this result can be related to the fact that some users tend to perceive similarity as simplicity in terms of streetscape when a street facade contains buildings similar in visual character and architectural style.

The largest proportion of users from Pelotas (60% of users) and a significant number of users from Gramado (42.11% of users) agree that street 2 is 'very simple' and 'simple'. In addition, a significant number of users from Gramado and Pelotas evaluate street 3 as 'neither complex nor simple' (Gramado: 37.25% of users; Pelotas: 40.74% of users) and 'very simple' and 'simple' (Gramado: 45.10% of users; Pelotas: 37.04% of users). On the other hand, the majority of users from Oxford (60.71% of users) evaluate street 3 as 'very complex' and 'complex'. In this regard, as indicated when street 1 was analysed, streets 2 and 3 comprise similar buildings in visual character and architectural style, and, it can cause a significant group of users to perceive similarity as simplicity in terms of street facade.

The majority of users from Oxford (58.06%) and a significant number of respondents from Gramado (38.89% of users) agree that street 5 is 'neither complex nor simple'. At the same time, 46.88% of users from Pelotas evaluate this street as 'very complex' and 'complex'. Comparing these findings with the physical characteristics of street 5, this results indicate that one or more of the following aspects of this street can have a higher influence on the perception and evaluation of users from Pelotas than on the perception and evaluation of users from Oxford and Gramado: (i) high variation of commercial signs in terms of size, number of chromatic groups, arrangement in relation to facades, size of images, and size of letters, and (ii) high variation of buildings in terms of fenestration, presence of horizontal and vertical partitions, and colours. In addition, as mentioned earlier, user familiarity with the streetscape can be influencing the responses of users from Pelotas when they evaluate street 5, which is located in this city.

A significant number of users from Oxford and Gramado classify street 6 as 'neither complex nor simple' (Oxford: 46.77% of users; Gramado: 34.43% of users), and as 'very simple' and 'simple' (Oxford: 35.48% of users; Gramado: 39.34% of users). On the other hand, a large number of respondents from Pelotas are divided between those who classify this street as 'very complex' and 'complex' (50% of users) and as 'neither complex nor simple' (34.78% of users). Comparing these findings with the physical characteristics of street 6, one or more of the

following aspects of this street can have a higher influence on the perception and evaluation of users from Oxford and Gramado than on the perception and evaluation of users from Pelotas: (i) low commercial signage variation in terms of chromatic contrast between letters and sign background, and size of images in relation to sign background, and (i) low building variation in the number of turns in facade perimeters, overall proportion of windows and doors, facade articulation, roof line, colour, and facade details. In addition, as mentioned earlier, user familiarity with street 6, which is located in Pelotas, can be influencing the perception and evaluation of residents in Pelotas.

Commercial Signage Variation

The results from the whole sample (361 users) indicate that the commercial streets chosen as the best in terms of appearance (streets 1, 2 and 3) are evaluated as having 'very low', 'low', and 'moderate' commercial signage variation, and 'very high', 'high', and 'moderate' building variation. On the other hand, the commercial streets chosen as the worst in terms of appearance (streets 5 and 6) are evaluated as having 'very high', 'high', and 'moderate' commercial signs variation, and 'very high', 'high', and 'moderate' building variation. The method applied to calculate complexity in commercial streetscapes by analysing the variation of commercial signs and buildings (Appendix D) produces results, which, in general, conform to user perception and evaluation of commercial signage and building variation, as demonstrated below.

Taking into consideration the responses of users from the whole sample (361 users), there are significant differences between streets 1, 2 and 3 in terms of commercial signage variation. According to users, street 3 has the highest commercial signage variation, followed by streets 1 and 2. The majority of users evaluate street 1 (54.90% of users) and street 2 (58.10% of users) as having 'very low' and 'low' commercial signage variation, while 43.40% of respondents classify street 3 as having 'moderate' commercial signage variation. Reviewing the results from the method applied to calculate complexity, streets 1 and 3 have almost the same level of commercial signage variation, while street 2 has the second lowest level of commercial signage variation when compared to the other streets in the sample. Although the level of commercial signage variation, defined by this method, of streets 1 and 3 is similar, some differences are found between the physical characteristics of these streets. Street 3 has higher commercial signage variation in size, arrangement in relation to facades, location on facades, presence of images, and size of letters and images in relation to sign background. These factors can be increasing commercial signage variation in street 3, as they may have more influence on user perception of signage variation than other factors.

There is no difference between the responses of users when evaluated commercial signage variation in streets 5 and 6. The majority of respondents agree that both these streets have 'very high' and 'high' commercial signage variation. The results from the method applied to calculate complexity in commercial

streetscapes (Appendix D) show that street 5 has lower commercial signage variation than street 6. In this regard, the following characteristics of street 5 are increasing user perception and evaluation of commercial signage variation: in comparison to street 6, street 5 has higher commercial signage variation in size, number of chromatic groups, arrangement in relation to facades, size of images in relation to sign background, and size of letters.

There is no difference between users from each city individually in terms of perception and evaluation of commercial signage variation, when the appearance of streets 1, 2, 3, 5, and 6 is evaluated. The majority of users from Oxford (51.40% of users), Gramado (56.40% of users) and Pelotas (59.60% of users) agree that street 1 has 'very low' and 'low' commercial signage variation. In relation to street 2, the majority of users from Pelotas (64.40% of users) and Oxford (60% of users), and a significant proportion of respondents from Gramado (42.10% of users) agree that this street has 'very low' and 'low' commercial signage variation. At the same time, a significant number of users from Pelotas (35.60% of users) and Oxford (40% of users), and the majority of users from Gramado (57.90% of users) recognize a 'moderate' variation in street 2. In relation to street 3, a significant number of respondents from Oxford (35.70% of users), Gramado (45.10% of users) and Pelotas (48.10% of users) agree that this street has 'moderate' commercial signage variation, while other users indicate 'high' and 'very high' commercial signage variation (Oxford: 42.90% of users; Gramado: 36.20% of users; Pelotas: 25.90% of users). In relation to streets 5 and 6, the majority of users from Oxford (street 5: 83.87% of users; street 6: 98.39% of users), Gramado (street 5: 88.89% of users; street 6: 93.44% of users) and Pelotas (street 5: 82.81% of users; street 6: 82.61% of users) agree that both these streets have 'very high' and 'high' commercial signage variation.

Building Variation

Taking into consideration the perception and evaluation of users from the whole sample (361 users), there are significant differences between streets 1, 2 and 3 in terms of building variation. These differences are placed between streets 1 and 2, and streets 2 and 3. Street 1 has higher building variation than street 2, and street 3 has higher building variation than street 2.

These results confirm the findings obtained from the method applied to calculate complexity (Appendix D). Findings from this method show that street 2 has the lowest building variation, when compared to streets 1 and 3. The majority of users from the whole sample (50% of users) agree that street 2 has moderate variation, while, in relation to streets 1 and 3, respondents are divided between those who mention a 'very high' and 'high' (street 1: 49.02% of users; street 3: 41.51% of users) and a 'moderate' (street 1: 42.48% of users; street 3: 48.11% of users) building variation.

There is no difference between streets 5 and 6 in terms of building variation, when the responses of users from the whole sample (361 users) were analysed.

In both these streets, users are divided between those who mention a 'very high' and 'high' (street 5: 48.32% of users; street 6: 37.87% of users), and a 'moderate' building variation (street 5: 36.91% of users; street 6: 52.66% of users). Taking into account the method applied to calculate complexity (Appendix D), street 5 has lower building variation than street 6. However, some differences can be seen between the physical characteristics of buildings in both these streets. Higher building variation in number of turns of facade shape perimeter, facade width, facade details, percentage of fenestration on building facade, overall proportion of windows and doors, presence of horizontal or vertical partition on building facade, and colour can be increasing user perception and evaluation of building variation in street 5.

Differences are found between users from the three cities in terms of perception and evaluation of building variation in street 1 and street 3. These differences are placed between users from Oxford and Gramado, and Oxford and Pelotas. In both these streets, the building variation is seen as higher by residents in Oxford than by residents in the Brazilian cities.

On the other hand, differences are not found between residents in the two Brazilian cities in terms of perception and evaluation of building variation. The majority of users from Gramado and Pelotas mention a 'moderate' building variation in street 1, while the majority of users from Oxford mention a 'very high' and 'high' building variation. In relation to street 3, the majority of users from Oxford agree that this street has 'very high' and 'high' building variation, while the largest number of respondents from Gramado agree that this street has 'moderate' building variation. In addition, users from Pelotas indicate that street 3 has a 'moderate', 'very high' and 'high', 'very low' and 'low' building variation. These results show that, in the case of street 1, user familiarity with the streetscape influences user perception and evaluation of building variation: residents in Oxford have a higher perception and evaluation of building variation in this street, located in Oxford, than users from the other case studies. In addition, in the case of street 3, the findings can be related to user tolerance of complexity: people who live in different places can have different levels of tolerance to the variation of physical characteristics of the streetscape. Building variation seen as high by users from Oxford can be seen as moderate or low by users from Gramado and Pelotas.

Commercial Signs versus Buildings covered by Signage

The commercial streets chosen by users as the best in terms of appearance (streets 1, 2 and 3) are perceived and evaluated by the majority of whole sample (361 users) as having a 'moderate' number of commercial signs, and a 'small', 'very small', and 'moderate' coverage of building facades by these media. At the same time, the commercial streets chosen as the worst in terms of appearance (streets 5 and 6) are perceived and evaluated by the majority of users from the whole sample as having 'many' and 'very many' commercial signs, and 'very much' and 'a lot' of coverage of building facades by these media. These results identify that user perception of

the number of commercial signs has been influenced by the percentage of street facade coverage by these media. In street 1, which has 46 signs, 55.56% of users mention a 'moderate' number of commercial signs, while in street 2, which has only 25 signs, 70.27% of users mention a 'moderate' number of commercial signs. In street 5, which has even fewer signs (20 signs), 89.27% of users indicate 'many' and 'very many' commercial signs. The same perception is verified in street 6, which has almost the same number of signs as street 1 (street 6 has 40 signs).

Street 2, which has the highest percentage of street facade covered by commercial signs (5.62% of the street facade) and the highest value of square metres of these media per linear street metre (0.68 m²/m) when compared to streets 1 and 3, is perceived and evaluated by the majority of users as having the lowest percentage of building facades coverage by commercial signs. On the other hand, a significant parcel of respondents indicate that street 1 (45.75% of users) and street 3 (55.66% of users) have a 'moderate' percentage of building facades coverage by commercial signs. However, both these streets have a lower percentage of street facade covered by these media (street 1: 2.70% of the street facade; street 3: 3.48%) and a lower amount of square metres of commercial signs per linear street metre when compared to street 2 (street 1: 0.31 m²/m; street 3: 0.25m²/m). One plausible explanation for this result is related to the location of shopfronts on building facades. In street 2, almost all shopfronts are aligned and located on the top part of the ground floor of every building facade, while in streets 1 and 3 there is more variety in relation to this aspect. Therefore, user perception and evaluation of the amount of building facades covered by commercial signs can be decreased by the display of almost all shopfronts of a street facade on similar zones of facades of different buildings (see Figure 7.1).

The findings related to streets 5 and 6 show that: streets with 9.11% or more of the street facade covered by commercial signs, and 0.85m² or more of commercial signs per linear street metre are perceived and evaluated by users from the whole sample as having 'very much' and 'a lot' of coverage of building facades by commercial signs.

There is no difference between users from the three cities in terms of perception and evaluation of the number of commercial signs with regard to the commercial streets chosen as the worst in terms of appearance (streets 5 and 6). The majority of users from these cities agree that streets 5 and 6 have 'many' and 'very many' commercial signs. Significant differences are found between responses of users from Oxford, Gramado and Pelotas in terms of the number of commercial signs in street 1 and street 3. Users from Oxford tend to indicate a higher number of commercial signs in street 1, which is located in Oxford, than users from Gramado and Pelotas. In Oxford, 65.27% of users agree that street 1 has 'very many' and 'many' commercial signs, while 76.92% of users from Gramado and 71.43% of users from Pelotas agree that this street has a 'moderate' number of commercial signs. In relation to street 3, which is located in Gramado, users from this city tend to mention a higher number of commercial signs than users from Pelotas.



Figure 7.1 Shopfronts in street 2 are located on the top part of the ground floor of facades leaving the upper floors almost free of signs (Source: author)

In Gramado, 27.45% of users agree that this street has 'very many' and 'many' commercial signs, while in Pelotas no respondents share this view.

Regarding the number of commercial signs in street 2, as verified when street 1 was analysed, users from Oxford have higher perception and evaluation of the number of commercial signs than users from Gramado and Pelotas. Also in this case, resident familiarity with the streetscape influences the perception and evaluation of users from Oxford, as street 2 is located in this city.

There is no difference between users from Oxford, Gramado and Pelotas in terms of perception and evaluation of the percentage of building facades covered by commercial signs in streets 3 and 5. The majority of users from these cities agree that street 3 has a 'moderate' percentage of building facades covered by these media, and street 5 has 'very many' and 'a lot' of the percentage of building facades covered by these media. There are significant differences between users from Oxford, Gramado and Pelotas in terms of perception and evaluation of the percentage of building facades covered by commercial signs in street 1 and street 6. In street 1, which is located in Oxford, users from this city tend to recognize a higher percentage of building facades covered by commercial signs than users from Gramado and Pelotas. On the other hand, in street 6, which is located in Pelotas, users from Oxford and Gramado tend to recognize a higher percentage of building facades covered by commercial signs than users from Pelotas.

In this regard, this book recognizes that these results are influenced by resident familiarity with the streetscape and user urban context. People who live in Brazil, where in many city centres the percentage of building facades covered by shopfronts and window displays is high, perceive and evaluate as low the coverage of 2.70% (street 1) to 5.62% (street 2) of a street facade by these media. In addition, in the case of street 6, the perception and evaluation of people who live in Oxford and Gramado, where the percentage of building facades covered by commercial signs is much lower than in Pelotas, is affected by the amount of 9.11% of a street facade (street 6) covered by these media more than the perception and evaluation of users from Pelotas. The analysis of frequencies of user responses indicates the same tendency verified when street 1 was analysed: users from Oxford tend to recognize a higher percentage of building facades covered by commercial signs in street 2 than users from the other cities. This data confirm the importance of user familiarity on evaluation of visual quality in commercial streetscapes.

Appearance of Commercial Streetscapes versus Number of Commercial Signs and Percentage of Covered Facades

There is a relationship between user perception and evaluation of the number of commercial signs and user satisfaction with the appearance of commercial streets (i) in relation to street 2 when responses of users from Pelotas are analysed, and (ii) in relation to streets 5 and 6 when responses of users from the whole sample, Oxford and Pelotas are analysed. In all these cases, the same tendency is verified: the higher user perception and evaluation of the number of commercial signs, the lower user satisfaction with the appearance of commercial street facades. In this regard, this study identifies that user perception and evaluation of number of commercial signs is influenced by percentage of street facade coverage by these media. This conclusion is based on the fact that the same tendency is found when streets with very different number of commercial signs are analysed. For example, street 2 has the second lowest number of commercial signs (25 signs) when compared to the other streets in the sample, but the highest percentage of street facade covered by these media (5.62% of the street facade) when compared to streets 1 and 3. On the other hand, street 5 has the lowest number of commercial signs (20 signs) and the highest percentage of street facade covered by these media (11.31% of the street facade) when compared to the other streets. And, street 6 has the second highest number of commercial signs (40 signs) and the second highest percentage of street facade covered by these media (9.11% of the street facade) when compared to the other streets.

If the number of shopfronts and window displays had a real impact on user satisfaction with commercial street facades, a relationship between user perception and evaluation of the number of commercial signs and user satisfaction with the appearance of the commercial street facades should be found in relation to street 1. This street has the highest number of commercial signs (46 signs), when compared to the other streets in the sample. However, this street is chosen as one of the best street facades in terms of appearance, while one of the streets chosen as the worst in terms of appearance (street 5) has the lowest number of commercial signs (20 signs), when compared to the other streets in the sample.

Taking into account user perception and evaluation of the percentage of building facades covered by commercial signs, the following tendency is verified when streets 2, 5 and 6 are analysed: the higher user perception and evaluation of coverage of buildings by commercial signs, the lower user satisfaction with the appearance of commercial streets. It is relevant to note that street 1, chosen by the highest number of users from the whole sample as the best street in terms of appearance, has the lowest coverage of building facades by commercial signs (2.70% of the street facade), while street 6, chosen by the highest number of users from the whole sample as the worst street in terms of appearance, has the second highest coverage of building facades by these media (9.11% of the street facade). These findings support the fact that user satisfaction with the appearance

of commercial street facades is influenced by the percentage of buildings covered by these media, and not by the number of shopfronts and window displays.

Consequently, a general commercial signage approach applicable to historic city centres should recommend a maximum percentage of street facade which can be covered by shopfronts and window displays without interfering with user satisfaction with the appearance of commercial streetscapes. Reflecting on what was suggested by the participants of the focus group discussion, a maximum of 3% of each building facade covered by commercial signs should be taken as an acceptable limit to historic city centres. Moreover, the results show that the street facades evaluated positively by users have a maximum of 0.68 m² of commercial signs per linear street metre. This limit should also be integrated into a general commercial signage approach.

When streets 2 and 3 are analysed: the lower user perception and evaluation of the number of commercial signs and the percentage of building facades covered by these media, the higher the influence attributed to the appearance of buildings, the appearance of commercial signs, and the number of commercial signs on user choices for these streets as the best in terms of appearance. In this regard, in street facades where user perception and evaluation of the number of commercial signs and the percentage of building facades covered by these media is low, the appearance and number of commercial signs are perceived and evaluated as positive elements of the streetscape. Analysing perception and evaluation of users in relation to streets 5 and 6, the findings demonstrate that: the higher user perception and evaluation of the number of commercial signs and the percentage of building facades covered by these media, the higher the influence attributed to historic buildings, the appearance of commercial signs, and the number of commercial signs on user choices for these streets as the worst in terms of appearance. Commercial signs are mentioned because they are negative features of the streetscape, and historic buildings are mentioned because they are harmed most obviously by shopfronts and window displays.

Relating these results with the ones presented earlier, a general commercial signage approach to historic city centres should take into account that, by controlling the percentage of building facades covered by commercial signs, the positive influence of the appearance of buildings and commercial signs and the number of these signs on user satisfaction with commercial streetscapes increase.

Buildings harmed by Commercial Signs

Taking into account responses of users from the whole sample (361 users), commercial streets evaluated positively in terms of appearance (streets 1, 2 and 3) can have buildings harmed by commercial signs but these are 'very few' and 'few'. On the other hand, commercial streets evaluated negatively in terms of appearance (streets 5 and 6) have buildings harmed by these media, and these are 'very many' and 'many'. A comparison between these findings and the number of



Figure 7.2 Commercial signs evaluated as negative in street 3 – a sign displayed on the roof and a sign displayed on the lateral wall of a building (Source: author)

Table 7.1 Factors that make users evaluate buildings as harmed by commercial signs in street 1

Problem	User comments
Fragmentation of the building facade into two disconnected parts – ground floor and upper floor.	Building 1: 'The ground floor does not match with the upper floors. Shopfronts and shop facade layouts fragment the ground floor into three different parts, which do not match with the upper floors.'
	Building 3: 'The ground floor is fragmented by commercial signs. Shopfronts of Starbucks and Adecco shops are not designed considering the building as a whole.'
Commercial signs do not get people's attention.	Building 6: 'The shopfront is dull and boring. It does not get people's attention.'
Size (too big) and colour (too bright) of shop window displays.	Building 14: 'Shop window displays are the main negative aspects of this building. They cover almost all shop windows, and the red colour is too bright.'

buildings previously identified as harmed by commercial signs (Appendix B) in each street facade indicates that: (i) two or less buildings harmed by commercial signs, representing 4% or less of the street facade, are perceived and evaluated by users as 'very few' and 'few', while (ii) two or more buildings harmed by these media, representing 46% or more of the street facade, are perceived and evaluated by users as 'very many' and 'many'.

According to the majority of users from the whole sample, there are no buildings harmed by commercial signs in street 2 (68.92% of users), while there are buildings harmed by these media in street 1 (56.86% of users) and street 3 (72.64% of users). When users indicate the main positive and negative characteristics of commercial signs, two negative aspects in street 3 are mentioned by 30% of users: a sign displayed on the roof and a sign displayed on the lateral wall of a building (see Figure 7.2). At the same time, users do not mention any negative aspects of commercial signs in streets 1 and 2. In this way, to understand why the majority of users recognize buildings harmed by commercial signs in street 1, the focus of the analysis needs to be made on user comments related to the following question 'identify the building with the commercial signage that you like the least'. When the respondents identified the buildings that they like the least in street 1, they also mentioned a set of aspects that make four buildings harmed by commercial signs in this street (see Table 7.1 and Figure 7.3). Consequently, these aspects influence user evaluation of the presence of buildings harmed by commercial signs.

Differences are not found between users from Oxford, Gramado and Pelotas in terms of perception and evaluation of the presence and number of buildings harmed by commercial signs in streets 3, 5 and 6: the majority of users from each city mention that there are buildings harmed by commercial signs and that these



Figure 7.3 Buildings evaluated as harmed by commercial signs in street 1 (Source: author)

buildings are 'very few' and 'few' in street 3, and 'very many' and 'many' in streets 5 and 6.

The majority of users from Oxford (70.83% of users) recognize buildings harmed by commercial signs in street 1, while the majority of users from the two Brazilian case studies mention that there are no buildings harmed by these media in this street (Gramado: 51.28% of users; Pelotas: 59.52% of users). In this regard, (i) user familiarity with the streetscape can be influencing responses of residents in Oxford, when street 1, located in Oxford, is evaluated, and, (ii) people exposed to disordered streetscapes with more frequency have different levels of toleration to disorder than people who do not experience these environments. Users from Gramado and Pelotas live in a country where many buildings are harmed by commercial signs in the majority of historic cities; so it can be influencing their responses when street 1, which contains preserved historic buildings, is evaluated; they do not perceive negative aspects in this street as they use to see streetscapes much more harmed. These findings support the idea that a general commercial signage approach to historic city centres needs to take into account the influence of both these non-physical variables as they indicate differences on user perception and evaluation due to urban context.

In relation to street 2, the majority of users from Pelotas (71.11% of users) and Gramado (89.47% of users) agree that there are no buildings harmed by commercial signs. In addition, the majority of users from Pelotas (92.31% of users) and all users from Oxford and Gramado, who mention that there are buildings harmed by commercial signs in this street, agree that these are 'few' and 'very few'.

Taking into account responses of users from the whole sample (361 users), there is no relationship between user perception and evaluation of the presence of buildings harmed by commercial signs and user satisfaction with the appearance of commercial street facades, when streets 1, 2 and 3 are evaluated. On the other hand, there is a relationship between these variables when street 5 and street 6 are analysed: the higher user perception and evaluation of the presence of buildings

harmed by commercial signage, the lower user satisfaction with the appearance of commercial street facades.

There is no relationship between user perception and evaluation of the number of buildings harmed by commercial signs and user satisfaction with the appearance of streets 1, 2 and 3. At the same time, when streets 5 and 6 are analysed, the findings show that the higher user perception and evaluation of the number of buildings harmed by commercial signage, the lower user satisfaction with the appearance of commercial street facades. When there are few buildings harmed by commercial signs (4% or less of the street facade), the presence and the number of buildings harmed by these media do not affect user satisfaction with the appearance of commercial streets. However, when there are many buildings harmed by commercial signs (46% or more of the street facade), the presence and number of buildings harmed by these media decrease user satisfaction with the appearance of commercial streetscapes.

The analysis of responses of users from each city individually – Oxford, Gramado and Pelotas – also confirm that there is no relationship between user perception and evaluation of the presence of buildings harmed by commercial signs and user satisfaction with the appearance of streets 1, 2 and 3. At the same time, all respondents who mention that there are buildings harmed by shopfronts and window displays in streets 5 and 6 are not satisfied with the appearance of these streets. Focusing on the responses of users from Oxford, the following tendency is verified in both these streets: the higher user perception and evaluation of the number of buildings harmed by commercial signs, the lower user satisfaction with the appearance of the commercial street facades. When analysing the responses of users from Pelotas in relation to street 6, the results show the same tendency. These results indicate that when buildings are not harmed by signage other aspects are influencing user satisfaction; while when buildings are damaged by these media, it is a crucial factor that decreases user satisfaction with commercial environments.

Commercial Signs versus Historic Buildings

Differences are not found between responses of users from the whole sample and each city individually – Oxford, Gramado and Pelotas – in relation to the influence of commercial signs on the appearance of historic buildings in streets 1, 2, 5 and 6³. The majority of people agree that in the commercial street facades chosen as the best in terms of appearance (streets 1 and 2), commercial signs do not interfere with the appearance of historic buildings; they mention that these media make these buildings 'neither beautiful nor ugly'. On the other hand, in the commercial street facades chosen as the worst in terms of appearance (streets 5 and 6), users mention that commercial signs interfere negatively with the appearance of historic

3 Street 3 is not considered in this section because 90.57% of users from the whole sample (361 users) do not recognize historic buildings in this street.



Figure 7.4 Two opposite realities – in Oxford commercial signs are part of the aesthetic design of building facades (e.g. building in street 2) and in Pelotas the signs harm the visual quality of buildings (e.g. building in street 5), respectively (Source: author)

buildings; they say that these media make these buildings 'very ugly' and 'ugly' (see Figure 7.4). In this regard, the results from the application of the criteria defined in Chapter 1 (in section 'Visual Quality of the Built Environment') to identify buildings harmed by commercial signs converge with the majority of user responses, (i) the influence of commercial signs on historic buildings previously classified as harmed by commercial signs is negative, while (ii) the influence of commercial signs on historic buildings previously classified as not harmed by commercial signs is neutral or positive.

When the appearance of the commercial streets is evaluated by users from the different cities, a relationship between the following variables is found: (i) the importance attributed by users to physical characteristics of the streetscape when they chose the best and the worst streets in terms of appearance, and (ii) user perception and evaluation of the influence of commercial signs on the appearance of historic buildings. In addition, there is a relationship between this last variable and user perception and evaluation of beauty, interest, order, colour variation, and complexity in relation to the appearance of those streets.

Taking into account the streets chosen as the best in terms of appearance (streets 1 and 2), the following tendency is found: the more positive the influence of commercial signs on the appearance of historic buildings, (i) the more important the influence of the historic buildings and the appearance and number of commercial signs on user choices for these streets as the best in terms of appearance, and (ii) the more interesting and the less colourful these streets. Taking into account user responses in relation to the streets chosen as the worst in terms of appearance (streets 5 and 6), the following tendency is found: the more negative the influence of commercial signs on the appearance of historic buildings, (i) the more important the influence of appearance of buildings and number of commercial signs on user choices for these streets as the worst in terms of appearance, and (ii) the less ordered, the more colourful, and the more complex these streets.

In conclusion, when the influence of commercial signs on the appearance of historic buildings is not negative, historic buildings and commercial signs are recognized as positive features of commercial street facades, and commercial street facades are seen as more interesting and less colourful. On the other hand, the results demonstrate that when the influence of commercial signs on the appearance of historic buildings is negative, buildings in general and commercial signs are recognized as negative features of commercial street facades. The findings also indicate that, by reducing the negative influence of commercial signs on the appearance of historic buildings, user perception and evaluation of beauty and order is increased.

Buildings and Commercial Signs that stand out first in a Person's Mind

The results of this section confirm what was discussed previously in Chapter 1 (section 'Subjectivity and Objectivity in Aesthetic Evaluation'): users tend to

use subjective terms to describe the streetscape. Expressions such as 'adequate', 'harmonious', 'attractive', and 'inappropriate' were used to describe the commercial signs and buildings of the commercial streets in the sample. These terms simply indicate what users felt when the commercial streets were evaluated, but do not identify the physical characteristics of the commercial signs and buildings that caused these impressions. This book links these user responses to the physical characteristics of the commercial signs and buildings of each street facade (see Appendices B and D). User answers to the open questions of questionnaire were grouped into categories, and the results presented below are based on the frequencies that these categories were mentioned.

Characteristics of Commercial Signs in the Streets chosen as the Best in terms of Appearance

According to responses of users from the whole sample (361 users), the most mentioned categories related to positive characteristics of commercial signs in streets 1, 2 and 3 are: 'commercial signage does not harm buildings' and 'identification of shops and information'. 'Discreet commercial signage' is also mentioned when the signage in streets 1 and 2 is evaluated. At the same time, differences are found with regard to the categories mentioned in streets 1, 2 and 3: (i) 'commercial signage does not harm buildings' is the most indicated positive category in street 1, (ii) 'ordered and standard commercial signage' is the most indicated positive category in street 2, and (iii) 'identification of shops and information' is the most indicated positive category in street 3.

Almost all these categories refer to subjective expressions used by respondents to describe commercial signs in the street facades. However, in street 2, two categories refer to physical characteristics of these media: 'size' and 'location of commercial signs on facades'. Comparing with the physical characteristics of this street, the result indicates that commercial signs stand out in people's minds as positive elements of commercial streetscapes when the majority of shopfronts and window displays are 'very small' and 'small' (area $\leq 3\text{m}^2$) and displayed on similar zones of facades of different buildings. Taking into account negative characteristics of commercial signs, two categories are mentioned by users from the whole sample and each city individually when street 3 is evaluated: size of signs and location of a sign on a building roof. Figure 7.2 already showed these cases.

Five categories related to positive characteristics of commercial signs are mentioned simultaneously by users from England and Brazil when one or more streets in the sample are evaluated: (i) 'commercial signage does not harm buildings' (street 1), (ii) 'identification of shops and information' (street 1), (iii) 'ordered and standard commercial signage' (street 2), (iv) 'size' (streets 2 and 3), and (v) 'general commercial signage appearance' (street 3). In addition, users from the Brazilian cities mention (i) 'discreet commercial signage' when the signs in street 1 are analysed, and (ii) 'good legibility of signs' when the signs in street 2 are analysed.

A comparison between the responses of users related to the categories described in objective terms (such as size, discreet commercial signage, and good legibility of commercial signs) and the physical characteristics of the commercial signs in streets 1, 2 and 3 (see Appendices B and D) indicates the following considerations:

- a. 'Size' – commercial signs classified as 'very small' and 'small' (area ≤ 3 m 2) tend to be evaluated positively by users from different urban contexts.
- b. 'Discreet commercial signage' – taking into account user responses related to this category, signs previously classified as 'very small' and 'small' (area ≤ 3 m 2), chromatic congruence between signs and building facades, and predominant lettering style classified as type 4 – Sans Serif (see Figure 1.6 in Chapter 1) are evaluated as positive features in commercial streets by users from different urban contexts.
- c. 'Good legibility of signs' – taking into account perception and evaluation of users from different urban contexts, this study indicates that one or more of the following physical aspects of commercial signs tends to help user legibility of texts: (i) chromatic contrast between letters and sign background classified as level 3 (see Table 1.2 in Chapter 1), (ii) lettering styles classified as type 2 – Modern – and type 4 – Sans Serif (see Figure 1.6 in Chapter 1), (iii) height of letters classified as high (height ≥ 0.55 cm), and (iv) predominant sign background in relation to size of letters, or balance between size of letters and size of sign background (see Figure 1.7 in Chapter 1).

Characteristics of Buildings in the Streets chosen as the Best in terms of Appearance

When considering all sample (361 users), the following three categories related to positive characteristics of buildings in streets 1, 2 and 3 are the most mentioned: (i) 'buildings height and streetscape skyline', (ii) 'good conservation', and (iii) 'general building appearance'. Taking into account the street facades characterized by historic buildings (streets 1 and 2), 'historic character and presence of historic buildings' is another category noted by users.

A comparison between responses of users related to the categories described in objective terms (such as building heights and streetscape skyline, good conservation, and historic character and presence of historic buildings) and the physical characteristics of the buildings in streets 1, 2 and 3 (see Appendices B and D) indicates the following considerations:

- a. 'Building heights and streetscape skyline' – the following combinations of physical characteristics of buildings in commercial street facades tend to be evaluated positively by users from different urban contexts: (i) with regard to the results related to street 1, high complexity in terms of building silhouette, skyline characterized as asymmetry level two (main

turns on shape perimeter ≤ 5 ; see Chapter 1, sub-section ‘Silhouette’ in section ‘Complexity in Commercial Streetscapes: Good or Bad?’) and height of buildings classified between 9.29 and 11.97 metres; (ii) with regard to the results related to street 2, low complexity in terms of building silhouette, skyline characterized as asymmetry level three (main turns on shape perimeter < 4) and height of buildings classified between 11.97 and 14.65 metres; and (iii) with regard to the results related to street 3, high complexity in terms of building silhouette, skyline characterized as asymmetry level one (main turns on shape perimeter ≥ 6), and height of the buildings classified between 3.93 and 6.61 metres.

- b. ‘Good conservation’ – commercial street facades comprising ordinary buildings in good maintenance (painted and clean) and preserved historic buildings are evaluated positively by users from different urban contexts.
- c. ‘Historic character and presence of historic buildings’ – commercial street facades characterized by preserved historic buildings are evaluated positively by users. This result is related to the fact that 93% of the buildings in street 1, and 67% of the buildings in street 2 are historic and preserved, and both these streets are evaluated positively by users from the three cities.

Taking into account responses of users from the whole sample, the results show that there are no negative physical characteristics of buildings in streets 1 and 2. However, three categories related to negative aspects of the buildings in street 3 are indicated by users from the whole sample and each city individually as well: ‘general building appearance’ (51.53% of users), ‘building heights and streetscape skyline’ (32.38% of users), and ‘lack of historic buildings’ (58.89% of users). The analysis of user responses related to these categories shows that the following physical aspects can negatively affect user perception and evaluation of the appearance of commercial streetscapes: (i) lack of difference between shops and residencies in terms of building facade typology, (ii) buildings at the corners of a street facade too high in relation to the other buildings in the street (see Figure 7.5), and (iii) replacement of historic buildings for contemporary designs in order to recreate the visual character of a city.

Comparing responses from residents in the different cities, the findings can be sorted under five categories related to positive characteristics of buildings mentioned by users from England (Oxford) and Brazil (Gramado and Pelotas) when one or more commercial street facades are evaluated: (i) ‘general building appearance’ and ‘good conservation’ are noted in street 3, (ii) ‘building heights and streetscape skyline’ and ‘historic character and presence of historic buildings’ are noted in streets 1 and 2, and (iii) ‘variety/diversity’ is noted in streets 2 and 3. Users from the two Brazilian case studies also mention: (i) ‘general building appearance’ when street 1 is evaluated, (ii) ‘good conservation’ of buildings when streets 1 and 2 are evaluated, and (iii) ‘building heights and streetscape skyline’ and ‘colours’ of buildings when street 3 is evaluated.



Figure 7.5 Buildings at the corners of street 3 are recognized by users as too high in relation to the other buildings. It is classified by them as a negative aspect (Source: author)

Characteristics of Commercial Signs in the Streets chosen as the Worst in terms of Appearance

When analysing the sample as a whole (361 users), 'size' is the most mentioned category related to negative characteristics of commercial signs in streets 5 and 6. 'Disordered commercial signage', 'colour', 'general commercial signage appearance', 'number of commercial signs', and 'buildings harmed by commercial signage' are also indicated as negative aspects of these media in both streets.

The physical characteristics of commercial signs related to the following categories are mainly described in subjective terms: 'disordered commercial signage', 'general commercial signage appearance', and 'buildings harmed by commercial signage'. In these cases, it is difficult to identify the physical characteristics of these media that influence user perception and evaluation of the appearance of commercial street facades. At the same time, user responses to the following categories can be linked to physical characteristics of commercial signs in street 5 and 6 (see Appendices B and D): 'colour', 'size', and 'number of commercial signs'. In this regard, the following considerations are made:

- 'Colour' – with regard to the chromatic groups previously identified in each street facade, the majority of commercial signs in streets 5 and 6 are classified into the groups H, I and M (see Plate 4c). In this regard, user perception and evaluation of the appearance of commercial street facades can negatively be affected when the majority of commercial signs are in red and yellow hues, hot and medium colours and white is used as the colour of sign backgrounds.
- 'Size' – the majority of users complain that the commercial signs in streets 5 and 6 are too big. 30% of the signs in street 5 and 73% of the signs in street 6 are classified as 'big' ($4.50\text{m}^2 < \text{area} \leq 10\text{m}^2$) and 'very big' ($\text{area} > 10\text{m}^2$). In this regard, in a street facade, a minimal amount of 30% of shopfronts and window displays classified as 'big' and 'very big' can negatively affect user perception and evaluation of the appearance of commercial streetscapes according to users from different urban contexts.

- c. 'Number of signs' and 'facades covered by commercial signage' – user perception and evaluation of the number of commercial signs can be influenced by the percentage of building facades covered by these media. Analysing the physical characteristics of streets 5 and 6 (see Appendix B), a minimum of 9.11% of a street facade covered by commercial signs and a minimum of 0.85 m² of these media per linear street metre can negatively affect user perception and evaluation of commercial street facades.

Although user responses related to the category 'buildings harmed by commercial signage' were mainly described in subjective terms, one conclusion can be made: a minimum amount of 46% of a street facade harmed by shopfronts and window displays negatively affect user perception and evaluation of commercial street facades. This is because street 5 has 44% of its buildings harmed by commercial signs, representing 56% of its street facade, and street 6 has 33.33% of its buildings harmed by these media, representing 46% of its street façade (see Appendix B).

Taking into account positive characteristics of commercial signs in streets 5 and 6, only one category is noted by users from the whole sample and each city individually: 'identification of shops and information' (20% of users). This result indicates that when the appearance of commercial street facades is evaluated negatively, the only aspect of commercial signs recognized as positive by users is related to the functions of these media, as identification of shops and information.

There are common views between users from different cities. Four categories related to negative physical characteristics of commercial signs in streets 5 and 6 are mentioned by users from England and Brazil when each city is analysed: (i) 'general commercial signage appearance', (ii) 'colour', (iii) 'buildings harmed by commercial signage', and (iv) 'size'. Common views are also found between users from the two Brazilian case studies when both these street facades are evaluated: they mention 'number of commercial signs' and 'disordered commercial signage'. In addition, users from Gramado and Pelotas mention 'facades covered by commercial signage' when street 5 is evaluated, and 'ordinary commercial signage' when street 6 is evaluated. All these categories are the same mentioned by users from the whole sample.

Characteristics of Buildings in the Streets chosen as the Worst in terms of Appearance

Only two categories related to negative physical characteristic of buildings in streets 5 and 6 are mentioned by users: 'general building appearance' and 'colour'. Comparing user responses related to both these categories with the physical characteristics of the buildings in streets 5 and 6 (see Appendices B and D), the following considerations are made:

- a. 'General building appearance' – street facades characterized by disordered streetscape and buildings harmed by commercial signs, comprising buildings classified as 'Contemporary Box' (see Appendix A) tend to be evaluated negatively by users from different urban contexts.
- b. 'Colour' – the chromatic combinations identified on the building facades in street 5 (white and yellow-orange hues in hot and medium colours and harmony by contrast) and street 6 (blue-purple hues in cold and light colours, green-yellow hues in cold and medium colours, brown-red hues in hot and medium colours and monochromatic harmony; see Plate 4a, 4b, 4c) affect negatively user perception and evaluation of commercial streetscapes. Building facades fragmented by colours can also negatively affect user perception and evaluation.

When streets 5 and 6 are evaluated, 'historic character and presence of historic buildings' is mentioned by users from the whole sample (street 5: 57% of users; street 6: 60% of users) and each city individually (Street 5 – 10% of users from Oxford, 42% from Gramado, and 52% from Pelotas; Street 6 – 46% of users from Oxford, 37% from Gramado, and 18% of users from Pelotas) as a positive characteristic of the buildings in both streets. In this regard, historic buildings are positive features of commercial streetscapes, even when these buildings are harmed by commercial signs. In relation to street 5, a well preserved historic building in the middle of the street facade can also be influencing user responses (see Figure 6.6 in Chapter 6). In addition, when street 5 is evaluated, 'building heights and streetscape skyline' is another category mentioned by users as a positive characteristic of the buildings (30% of users from the whole sample, 25% from Oxford, 27% from Gramado, 35% from Pelotas). In this regard, (i) similar buildings in height and (ii) streetscape skyline classified as asymmetry level three (main turns on shape perimeter < 4 ; see Chapter 1, sub-section 'Silhouette') are recognized by users as positive elements in commercial street facades (see Figure 7.6).

'Colour' is the most mentioned category related to negative characteristics of the buildings according to users from Gramado and Pelotas in street 5, and Oxford and Pelotas in street 6. The following categories are also indicated by users, when these streets are analysed: 'buildings harmed by commercial signage' is mentioned by users from Pelotas, and 'general building appearance' is mentioned by users from Oxford. Taking into account responses of users from Oxford, Gramado and Pelotas and the physical characteristics of the buildings in streets 5 and 6, the following results are highlighted. They indicate that user urban context is influencing user perception and evaluation of the appearance of both these commercial streetscapes, as discussed below:

- a. Respondents from Oxford, where the city centre is characterized by high complexity, mention the following categories as negative characteristics of the buildings in street 6: 'boring/monotonous streetscape' and 'similar height of buildings and streetscape skyline'. Taking into account these



Figure 7.6 Similar buildings height is perceived as a positive characteristic of buildings in street 5 (Source: author)

categories and the physical characteristics of buildings in street 6 (see Appendix D), low variation of (i) turns on street facade shape perimeter (five main turns), (ii) facade details, (iii) texture of buildings (facing or revetment of facades), (iv) overall proportion of windows and doors, and (v) colour can affect the perception and evaluation of users from Oxford more than the perception and evaluation of users from the other cities. In this regard, the majority of buildings of a street facade classified between 6.61 to 9.29 metres of height, all buildings with flat roof, and the street facade silhouette classified as asymmetry level two (main turns on shape perimeter ≤ 5 ; see Chapter 1, sub-section 'Silhouette') are aspects of the streetscape evaluated negatively by users who are exposed to a high complex street scenes in their everyday life.

- b. Users from Gramado, where space between buildings is a common characteristic of the city centre (see Figure 7.7), mention 'lack of space between buildings' as a negative aspect of the buildings in street 6. In addition, users from Pelotas, where the city centre is characterized by disordered streetscapes and lack of building conservation, mention 'lack of conservation' and 'disordered buildings' as negative aspects of the buildings in streets 5 and 6.

Buildings classified as the Best and the Worst in terms of Signage and Facade

There are no differences between users from Oxford, Gramado and Pelotas in terms of perception and evaluation of the buildings that they like the most and like the least due to the relationship between commercial signs and building facade. The majority of users from the three cities like and dislike the same buildings (see Table 7.2). Taking into account the buildings that the majority of users like the most and the least in streets 3 and 5, it is relevant to note that there is no commercial signage on these building facades. This book assumes that (i) in street 3, building 1 is mentioned because of the cultural symbolic meaning attributed by users to this, it is the main theatre of the city (see Figure 6.4 (a) in Chapter 6), and (ii) in street 5, building 5 is mentioned because this is the only preserved historic building and unharmed by commercial signs in this street (see Figure 6.6,

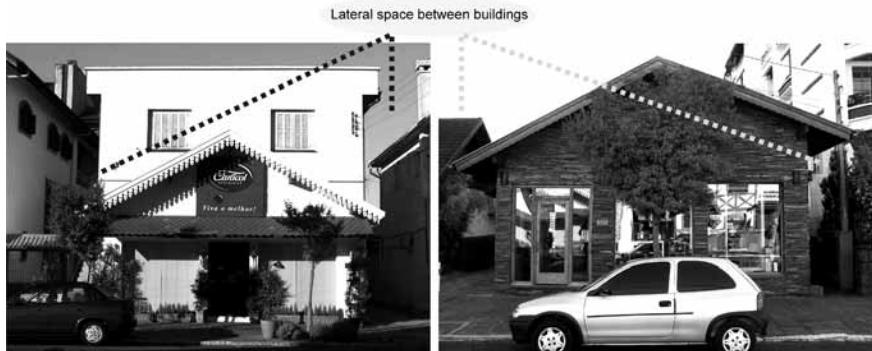


Figure 7.7 Lateral space between buildings is a common characteristic in the city of Gramado (Source: author)

detached with a frame, in Chapter 6). The results from the analysis presented in this section when related to both these streets refer to the second buildings that users like the most as there are commercial signs on these facades.

With regard to the physical characteristics of the buildings that the majority of users like the most and the least, which were identified during field visits to the study areas in each city and by respondents when answering the open questions of questionnaire, a general commercial signage approach to historic city centres should take into account that:

- a. Commercial signs should be designed in order to respect the aesthetic composition of building facades – these media cannot cover features of building silhouette, facade details and facade articulation; at the same time, these media need to get people's visual attention. Physical characteristics of commercial signs such as size, material, lettering type and size, colour, and location on facades should be designed to complement the aesthetic composition of building facades.
- b. Commercial signs should be designed with respect to the aesthetic composition of the whole building facade (ground floor and upper floors). The relationship between ground floor and upper floors needs to be preserved. Standard signs, such as franchise signs, cannot be encouraged in historic city centres; these signs need to be designed according to the visual character of each particular place.
- c. Billboards and banners displayed on building facades and/or roofs should be banned in historic city centres.
- d. When more than one shop is located in one building, the commercial signs of these shops should be designed as a group, and the aesthetic composition of the whole building facade should be taken into account in their design. The fragmentation of building facades by colours and signs, and the elimination of (i) original features (such as doors, windows and details) or

Table 7.2 Physical characteristics of the buildings that users like the most and like the least

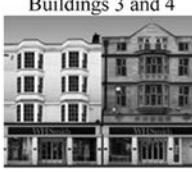
BUILDINGS THAT USERS LIKE THE MOST		BUILDINGS THAT USERS LIKE THE LEAST		
	Building	Physical characteristics	Building	Physical characteristics
STREET 1	Building 11 	Commercial signage is integrated with the aesthetic composition of the building facade. The sign does not cover elements related to building silhouettes, facade details, and facade articulation.	Building 3 	The commercial signs of the two shops located in this building do not take account of the aesthetic composition of the building as a whole.
STREET 2	Building 1 	Commercial signs from both shops do not interfere with the aesthetic composition of the building facade and do not fragment the ground floor.	Buildings 3 and 4 	Both buildings have standard commercial signs and similar ground floor design. At the same time, they have completely different upper floors. This shows that the commercial signs are designed without considering the aesthetic composition of each building.
STREET 3	Building 3 	Commercial signage is part of the aesthetic composition of the building facade. Size, material, lettering type and size, colour and location on facade are designed to complement the "Neo-Bavarian" style of the building.	Building 4 	A billboard displayed on the roof and a banner located on the body of the facade are the main negative aspects of this building. This study suggests that size, location on building facade, and colour are the main negative features of these signs.

Table 7.2 continued...

STREET 5	<p>Building 3</p> 	<p>The ground floor is not fragmented by the commercial sign. This media does not harm the aesthetic composition of the building facade, and does not cover elements related to building silhouette, facade details, and facade articulation. The main positive characteristics of the commercial sign can be related to size, location on facade, and colour.</p>	<p>Building 1</p> 	<p>The most negative aspect of this building can be related to the fragmentation of the ground floor by colour and commercial signs. The building is treated as three different blocks: shop owners do what they want with their "part of facade". The following commercial signage aspects are also negative features: size, location and arrangement on facade, colour and promotion signs painted on facade walls.</p>
STREET 6	<p>Building 1</p> 	<p>Commercial signage does not harm the aesthetic composition of the building façade, and does not cover elements related to silhouette, facade details and articulation. The main positive characteristics of the commercial signs are: size, colour, and location on facade.</p>	<p>Building 2</p>  <p>Part D</p>	<p>The main negative characteristic of this building is the fragmentation of the facade by colour and commercial signs. Alteration of original windows and doors, and the total elimination of the aesthetic composition of the building facade at its right side (part D of façade, see picture on the left) contribute to this fragmentation. This research also shows that size, colour, and location on facade are the main negative features of the commercial signs in this building.</p>

(ii) aesthetic composition of historic building facades cannot be allowed. These issues were also recognized by the participants of the focus group discussion.

Table 7.3 summarizes the physical characteristics of commercial signs and buildings that influence perception and evaluation of users from different urban contexts in positive and negative ways.

Conclusion

The discussions presented in this chapter are based on the common perceptions and evaluations found between users from the different cities analysed in this book. Taking into account the responses of these users, there are two common views: (i) commercial streetscapes, where different commercial signage approaches are applied but shopfronts and window displays are ordered, are evaluated as beautiful, interesting and ordered, while (ii) commercial streetscapes, where commercial signage controls are not effective and shopfronts and window displays are disordered, are evaluated as ugly, boring and chaotic. These results are supported by the literature review, which says that: disordered streetscapes tend to be evaluated negatively by users. The findings also indicate that commercial street facades with ordered commercial signage plus low or high colour variation and complexity are evaluated positively by users from different urban contexts. However, high colour variation and complexity are recognized as negative features in commercial streetscapes when associated with disordered commercial signage.

In this regard, a general commercial signage approach to historic city centres needs to be designed in order to increase user perception and evaluation of beauty, interest and order in relation to commercial streetscapes. This chapter also shows that the level of colour variation and complexity needs to be controlled according to the physical characteristics of each particular place. This control can preserve the individual historic character of places, and promote city centres seen as interesting and ordered by users. This general approach needs to take into account that users can perceive 'similarity' as 'simplicity' when the level of complexity of commercial street facades is evaluated. For example, commercial street facades composed of buildings similar in visual character and architectural style are seen as not complex, even when the variation between the physical characteristics of their buildings (such as number of stories, roof line and building symmetry) is high. This issue needs to be considered in controls related to the variation of commercial signs and buildings.

The level of variation of commercial signs and buildings needs to be taken into account in the development a general commercial signage approach to historic city centres. The results show that high or moderate variation of commercial signs and buildings when associated with lack of order among shopfronts and window displays create commercial street facades evaluated negatively by users from

Table 7.3 Positive and negative physical characteristics of commercial signs and buildings and factors that can improve the appearance of historic city centres

Commercial Signs	Buildings
<p><i>Positive characteristics</i></p> <ul style="list-style-type: none"> · Size: when the majority of shopfronts and window displays are ‘very small’ or ‘small’ (area $\leq 3m^2$), and displayed on similar zones of facades of different buildings in a streetscape, commercial signs tend to stand out in users’ mind as positive elements of commercial street facades. · Discrete commercial signage: signs classified as ‘very small’ or ‘small’ (area $\leq 3m^2$), colour of signs in congruence with colour facades, and predominant lettering style classified as type 4 (Sans serif, Figure 1.6) tend to be evaluated positively by users. · Good legibility of signs: the following aspects help user legibility of texts in commercial signs – chromatic contrast between letters and sign background classified as level 3 (Table 1.2), lettering style classified as type 2 (Modern) and type 4 (Sans Serif, Figure 1.6), height of letters classified as big (height ≥ 0.55 cm), and predominant sign background or balance between size of letters and size of sign background. 	<p><i>Positive characteristics</i></p> <ul style="list-style-type: none"> · Building heights and streetscape skyline: three different combinations of physical characteristics are positively evaluated by users: (i) high complexity in terms of building silhouette, skyline characterized as asymmetry level two (main turns on shape perimeter ≤ 5), and height of buildings between 9.29m and 11.97m; (ii) low complexity in terms of building silhouette, skyline characterized as asymmetry level three (main turns on shape perimeter < 4), and height of buildings between 11.97m and 14.65m; and (iii) high complexity in terms of building silhouette, skyline categorized as asymmetry level one (main turns on shape perimeter ≥ 6), and height of buildings between 3.93m and 6.61m. · Good conservation: streetscapes comprising buildings in good-maintenance (painted and clean) and well preserved historic buildings are positively evaluated by users. · Historic character and presence of historic buildings: street facades comprising a minimum of 67% of well-preserved historic buildings are positively evaluated by users.

Table 7.3 *continued...*

Commercial Signs	Buildings
<p><i>Negative characteristics</i></p> <ul style="list-style-type: none"> · Colour: in a street facade, the majority of commercial signs in red and yellow hues and in hot and medium colours, and white as the colour of commercial sign background negatively affect user evaluation of commercial streetscapes. · Size: in a street facade, a minimal amount of 30% of shopfronts and window displays classified as 'big' ($4.50 \text{ m}^2 < \text{area} \geq 10 \text{ m}^2$) or 'very big' ($\text{area} > 10 \text{ m}^2$) negatively affect user evaluation of commercial streetscapes. · Number of commercial signs and percentage of street facade covered by these media: a minimum of 9.11% of a street facade covered by commercial signs, and a minimum of 0.85 m^2 of commercial signs per linear street metre negatively affect user evaluation of commercial streetscapes. · Buildings harmed by commercial signs: a minimum amount of 46% of a street facade harmed by shopfronts and window displays negatively affect user evaluation of commercial streetscapes. 	<p><i>Negative characteristics</i></p> <ul style="list-style-type: none"> · Colour: the following chromatic combinations identified in the building facades in streets 5 and 6 negatively affect user evaluations of commercial streetscapes: <ul style="list-style-type: none"> (i) white and yellow-orange hues in hot and medium colours, and harmony by contrast; and (ii) blue-purple hues in cold and light colours, green-yellow hues in cold and medium colours, brown-red hues in hot and medium colours, and monochromatic harmony. Building facades fragmented by colours can also negatively affect user evaluation of commercial streetscapes. · User tolerance to building variation: low variation of (i) turns on street facade shape perimeter, (ii) facade details, (iii) textures of building, (iv) overall proportion of windows and doors, and (v) colour negatively affect user evaluation of commercial streetscapes. Commercial street facades comprising similar buildings in height (between 6.61 to 9.29 metres), all buildings with flat roof, and a streetscape silhouette classified as asymmetry level two (main turns on shape perimeter ≤ 5) are negatively evaluated by users. · General building appearance: buildings harmed by commercial signs, presence of buildings categorized as 'Contemporary Box' (Appendix A), and/or lack of difference between shops and residencies in terms of building facade typology are aspects of commercial street facades evaluated negatively by users. · Building heights and streetscape skyline: buildings at the corners of a street facade too high in relation to the other buildings of the street facade are evaluated negatively by users. · Lack of historic buildings: replacement of historic buildings for contemporary design in order to recreate the visual character of a city is evaluated negatively by users.

Table 7.3 concluded...

IN CONCLUSION: WHAT CAN IMPROVE THE APPEARANCE OF COMMERCIAL AND HISTORIC STREETSCAPES

1. Commercial signs designed to respect the aesthetic composition of building facades, but also to get people's attention. Physical characteristics of commercial signs, such as size, material, lettering type and size, colour, and location on facades, need to be designed to complement the aesthetic composition of building facades.
2. Commercial signs cannot cover aspects related to building silhouette, facade details, and building articulation.
3. Commercial signs designed with regard to the whole building facade (ground floor and upper floors). The relationship between ground floor and upper floor needs to be preserved, and standard signs displayed on buildings should not be encouraged in historic city centres.
4. Billboards displayed on building roofs, and banners displayed on building facades cannot be allowed in historic city centres.
5. When more than one shop is located in one building, the commercial signs of these shops should be designed as a group, and the aesthetic composition of the whole building facade should be taken into account in their design. The fragmentation of facades by colours and signs, and the elimination of original features and of the aesthetic composition of historic building facades cannot be allowed.

different urban contexts. This general commercial signage approach should take into account that by decreasing commercial signage variation, user satisfaction with the appearance of commercial street facades and user perception and evaluation of beauty, interest and order in relation to these streets will increase. At the same time, the variation of commercial signs and buildings needs to be taken into account as a group, as there is a relationship between user perception and evaluation of these variables: the higher user perception and evaluation of commercial signage variation, the higher user perception and evaluation of building variation. User perception and evaluation of commercial signage variation increases with high variation of the following aspects of signs: size, arrangement in relation to facades, location on facades, presence of images, size of letters and images in relation to size of sign background, lettering size, and number of chromatic groups. In addition, user perception and evaluation of building variation can increase with high variation of the following aspects of buildings: number of turns in silhouette perimeter, width of buildings, facade details, fenestration, overall proportion of windows and doors, presence of horizontal or vertical partition on facades, and colour. As these physical characteristics influence user perception and evaluation of commercial signage and building variation more than others, they should be considered in a general commercial signage approach in order to control the variation of commercial signs and buildings.

This chapter reinforces the idea discussed in the literature review that user perception and evaluation of the built environment is influenced by (i) user familiarity with a particular type of streetscape, (ii) symbolic meanings attributed to buildings, and (iii) urban context. The influence of these aspects is mainly seen

when residents evaluate the appearance of commercial streets located in their cities. The findings also show that people who live in different places have different levels of tolerance to the variation of physical characteristics of commercial signs and buildings. A general commercial signage approach to historic city centres should recommend that local regulations related to the control of commercial signage and building variation must take into account residents' perceptions and evaluations. Having identified the most appropriate levels of commercial signage and building variation according to residents' views, the local authority can begin to design commercial signage controls.

The results also indicate that before the design of local commercial signage controls, a chromatic analysis of the commercial street facades needs be carried out. Taking into account that colours can be used to strengthen the image of historic places by giving emphasis to features such as landmarks, the local authority should analyse the level of colour variation of the commercial streetscapes in the city centre, and investigate whether users are satisfied with this. It is important to point out that users from different urban contexts can have different tolerances to colour variation; people who live in places where high colour variation is predominant in commercial streetscapes tend to be less sensitive to certain chromatic combinations.

This chapter shows that different chromatic combinations in commercial street facades influence user perception and evaluation of the appearance of these places in different ways. For instance, certain chromatic combinations (always considering commercial signs and buildings as a group) should be encouraged in a city centre if the aim of the local authority is to increase the colour variation of this place. With regard to the perception and evaluation of users from Oxford, Gramado and Pelotas: (i) brown-red hues in hot and light colours and monochromatic harmony or harmony by light-dark contrast tend to decrease colour variation, while (ii) yellow-orange hues in hot and medium colours and harmony by light-dark contrast tend to increase colour variation. Brown-red hues in hot and light colours and harmony by contrast can divide users between those who perceive a more colourful or a more colourless streetscape. At the same time, a street facade characterized by blue-purple hues in cold and light colours, green-yellow hues in cold and medium colours, brown-red hues in hot and light colours and monochromatic harmony (see theses colour combinations in Plate 4b) tend to increase perception and evaluation of colour variation of users from England more than of users from Brazil. In this regard, user urban context influence user perception and evaluation of colour variation.

The method applied here to calculate complexity in commercial streetscapes (Appendix D) by analysing the variation of commercial signs and buildings produces results that, in general, converge with user perception and evaluation of complexity when the appearance of commercial street facades is evaluated. In this regard, this method can be integrated into a general commercial signage approach in order to monitor levels of complexity in commercial streetscapes. This method can also be adopted to predict whether the level of complexity of a street facade, in terms of commercial signage and building variation, will increase

with the insertion of new commercial signs or buildings. For example, the results from the application of this method could identify whether a new commercial sign would increase the complexity of a street facade too much, before this sign was displayed in the city centre. If these results indicated that the complexity would be increased too much with the insertion of the new sign, the local authority could ask the shop owner to re-design the media. This chapter recognizes this method as a potential tool to help the preservation of historic heritage in city centres, and to avoid the decrease of user satisfaction with the appearance of these places.

Taking into account responses of users from different urban contexts, user perception and evaluation of the percentage of building facades covered by commercial signs can influence user satisfaction with the appearance of commercial streetcapes. On the other hand, there is no relationship between user perception and evaluation of the number of commercial signs and user satisfaction with the appearance of commercial streets. This chapter also shows that user perception and evaluation of the number of commercial signs is influenced by the percentage of street facade coverage by these media. Taking into consideration the common views found between users from the different cities, a general commercial signage approach to historic city centres should highlight that 9% or more of a street facade covered by commercial signs, and 0.85 or more square metres of commercial signs per linear street metre are figures evaluated negatively by users in historic streetscapes. In addition, this general approach needs to take into account the location of commercial signs on building facades. The evidence shows that when almost all shopfronts of a street facade are located in similar zones of the facades of different buildings, user perception and evaluation of the percentage of building facades covered by commercial signs decrease.

Taking into account the common views found between users from the three cities, a general commercial signage approach to historic city centres should recommend the maximum percentage of a street facade, which can be covered by commercial signs. This recommendation can guarantee that the percentage of building facades coverage by commercial signs does not interfere with user satisfaction and user evaluation of order in relation to the appearance of commercial streetscapes. The results from the focus group discussion indicate that a maximum of 3% of each historic building facade covered by commercial signs is an acceptable limit in historic city centres. The findings related to the street facades evaluated positively in terms of appearance also demonstrate that a maximum of 0.68 square metres of commercial signs per linear street metre is seen as a positive characteristic of commercial streetscapes.

A general commercial signage approach should take into account that user perception and evaluation of the number of commercial signs and the percentage of building facades covered by these media influence user perception and evaluation of buildings and commercial signs, when the appearance of commercial streets is evaluated. The evidence presented shows that when user perception and evaluation of the number of commercial signs and the percentage of building facades covered by these media is low, buildings and commercial signs are recognized as positive

elements of commercial streetscapes. On the other hand, when user perception and evaluation of the number of commercial signs and the percentage of building facades covered by these media is high, commercial signs are recognized as negative elements of commercial streets.

The following six scenarios are identified as buildings harmed by commercial signs according to the perception and evaluation of users from the different cities:

- (i) commercial signs covering totally or partially elements of building silhouette, facade details and facade articulation;
- (ii) disconnection between building ground floor and upper floors due to the design of commercial signs and the layout of shops in the ground floor;
- (iii) posters in bright colours covering shop windows;
- (iv) commercial signs not separate enough from building facades; as a result, these media do not get people's attentions;
- (v) commercial signs painted on blank lateral walls of buildings or located on roofs of building as billboards; and
- (vi) aesthetic composition of building facades fragmented by commercial signs and/or colours.

At the same time, the findings show that the commercial street facades chosen as the best in terms of appearance have buildings harmed by commercial signs but these are 'very few' and 'few' (4% or less of the street facade), while the commercial street facades chosen as the worst in terms of appearance have buildings harmed by these media, and these are 'very many' and 'many' (46% or more of the street facade). In this regard, user perception and evaluation of buildings harmed by commercial signs needs to be decreased in order to not interfere on user satisfaction with the appearance of commercial streetscapes. Consequently, those six scenarios, which are recognized by users from different urban contexts as buildings harmed by signs, should be considered in a general commercial signage approach as situations that must be avoided in historic city centres.

The criteria adopted here to identify buildings harmed by commercial signs (see Chapter 1, item 'Which factors do influence aesthetic judgments' in 'Order and Disorder') should be taken into account in the development of a general commercial signage approach. They can be used to guide local authorities to design commercial signage controls in historic city centres. This general approach should also recommend that shopfronts and window displays be designed so as not to interfere with the aesthetic composition of historic buildings; the effect of these media on these building facades should be neutral. The findings show that, in the commercial street facades evaluated positively by users in terms of appearance, commercial signs make historic buildings 'neither beautiful nor ugly'. Furthermore, this general approach needs to highlight that, when commercial signs do not harm historic buildings and their surrounding areas, historic buildings and commercial signs are recognized as positive features of commercial streetscapes by users from different urban contexts.

Common views are found between users from the different cities when analysing the positive and negative physical characteristics of commercial signs and buildings that stand out in people's minds first when the appearance of commercial streetscapes is evaluated. In addition, the majority of users from the three case studies recognize the same buildings as the ones they like the most and like the least due to the relationship between commercial signs and buildings. In this regard, the findings identify a set of physical characteristics of commercial signs and buildings that influences perception and evaluation of users from different urban contexts in the same way. These physical characteristics can be taken into account by a general commercial signage approach and be used to design general guidelines to help national, regional and local authorities from different urban contexts to control commercial signage in historic city centres. In this regard, this general commercial signage approach can help to promote historic city centres being perceived and evaluated positively by users from different places.

The next chapter sets out the main conclusions and final remarks of this book. It summarizes the main findings obtained from Chapters 5, 6 and 7 into aspects of the operation of commercial signage controls and physical characteristics of commercial signs and buildings that need to be taken into account in the development of commercial signage design controls applicable to historic city centres of different urban contexts.

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Conclusion

What is Needed to Enhance Visual Quality in Historic and Commercial City Centres?

This book examined the problem of visual pollution in historic city centres focusing on the damage caused to the visual quality of these places by shopfronts and window displays. It was found here that there is a lack in the literature of any evidence which relate the aspects of the operation of commercial signage controls and the physical characteristics of commercial streetscapes to the perception and evaluation of users from different cities and cultures. Chapters 1, 2 and 3 presented many theoretical concepts, which show what users tend to prefer in terms of aesthetic composition of building facades; the Gestalt is the best known theory related to these concepts. However, in those chapters was found that there is no scientific evidence that indicates universal views between users from different urban contexts in terms of aesthetic compositions of commercial signs. The discussion showed that different commercial signage control approaches are applied in distinct places, but these initiatives are not based on principles derived from studies of perception and evaluation of users from different places. With regard to this context, this book assumed that if common views between users from different urban contexts can be found, these can be integrated with principles defined by urban design theories and applied in the development of a general commercial signage approach to historic city centres of different countries.

The discussions were based on the premise that the potential of historic city centres to satisfy the expectations of users from different cities and cultures is influenced by (i) the way that commercial signage controls are approached by local authorities, and (ii) the presence or absence of certain physical characteristics of commercial signs and buildings. This book argued that user perception and evaluation of commercial and historic city centres are relevant indicators of the performance of commercial signage approaches applied in these places.

Taking all these issues into account, this conclusion chapter answers the questions presented in Chapter 4 (section ‘What is Investigated Here?’): (i) which aspects of the operation of commercial signage controls need to be taken into account in the development of a general commercial signage approach applied to historic city centres of different urban contexts?; (ii) which physical characteristics of commercial signs and buildings need to be taken into account in the development of a general commercial signage approach applied to historic city centres of different urban contexts?; and (iii) are there common perceptions and evaluations between users from different urban contexts in terms of commercial

signage controls and the appearance of commercial streetscapes in historic city centres?. Together with this last question, the following assumption is discussed: 'While some visual preferences in the built environment may be influenced by the user's urban context, others (universals) may be common to the majority of people from different countries and may be useful in defining general principles that guide preference and satisfaction'.

At the end, this chapter summarizes the theoretical and original contribution to knowledge presented in this book.

Operation of Commercial Signage Controls

Eight specific issues related to the operation of commercial signage controls were identified as factors that need to be taken into account in the development of a general commercial signage approach to historic city centres. These issues work as recommendations to help national, regional, and local authorities of different urban contexts design and implement commercial signage controls. They were defined from the analysis of (i) commercial signage control approaches adopted in different historic city centres, and (ii) perceptions and evaluations of users from the three case studies presented.

Issue One – Protection of Historic Buildings plus Promotion of Commercial Appearance

According to user perception and evaluation, commercial signs reinforce the commercial appearance of places even in city centres where commercial signage controls are approached to protect historic heritage. It was demonstrated that reinforcing the commercial appearance of historic city centres is not necessarily considered a negative aspect by users from different urban contexts; it does not decrease user satisfaction with the appearance of historic city centres. The findings supported what was discussed in Chapter 3: users recognize that commercial signage is an important element of the contemporary streetscape, and local authorities should be able to manage the pressures between commercial interests and preservation of historic heritage in the design of commercial signage controls. In this regard, a general commercial signage approach should recommend that guidance be designed to protect the visual quality and historic character of places and, at the same time, promote the commercial image of historic city centres in a positive way.

Issue Two – Political Context

Implementation of a national commercial signage approach is fundamental in countries like Brazil where, each time that a new local government is elected, legislation implemented by the previous authorities are usually either modified or just forgotten. In this regard, a national approach could enforce the adoption of commercial signage controls by local governments of different political parties in a long term commitment. Every City Council would be encouraged to apply

commercial signage controls in order to protect the historic character and avoid visual pollution in historic city centres. The positive examples provided by the case study of Oxford and the cities discussed in Chapter 3 (Leeds, Dartmouth, Exeter, Bath, and York) demonstrated that a national commercial signage approach can help local authorities in the design and application of shopfronts and advertisement controls.

Issue Three – Public Participation

A general commercial signage approach needs to ensure local community participation in the development of commercial signage controls. Users from different urban contexts and where distinct commercial signage approaches are applied would like to be consulted whilst these controls are being developed. As argued in Chapter 3 and verified in the empirical investigation, users who participate in the development of commercial signage regulations tend to get involved in the process of implementation of these controls, helping local authorities identify irregular signs in the city centre. In the cities of Oxford in England and Gramado in Brazil, for example, residents are consulted during the development of commercial signage controls, and subsequently they help the City Council to identify whether shop owners have been respecting these controls. On the other hand, in the city of Pelotas also in Brazil, where the local community is not consulted during the process of development of commercial signage controls, residents do not feel committed in the support of the control of these regulations. The results demonstrated that the dialogue between local authorities and communities is essential for the successful implementation of any commercial signage control.

Issue Four – Persuading Shop Owners to Support Commercial Signage Controls

The discussions in this book identified three possible actions to persuade shop owners to support commercial signage controls: (i) organization of public meetings involving members of the local community, City Council officers and shop owners in order to discuss commercial signage controls, (ii) election of a mediator, who could be a link between shop owners and local authorities in order to discuss interests related to commercial activities and preservation of local character, and (iii) definition of a pilot study area in the city in order to test commercial signage guidelines. This last measure can help shop owners and other groups in society evaluate the improvements of the appearance of commercial streetscapes through the application of commercial signage controls on-site.

Issue Five – Guidelines described in Objective Terms.

A general commercial signage approach should recommend that commercial signage guidelines regulate physical characteristics of signs through objective terms such as 'size', 'proportion' and 'colour'. Subjective expressions, such as 'harmonious shopfronts' or 'signs should be adequate for building facades', should not form part of commercial signage controls. The use of subjective expressions

becomes ambiguous regulations because signs perceived as 'harmonious' by a group can be perceived as 'not harmonious' by others. In the city of Pelotas, for example, the definition of what is an adequate shopfront in the central area depends on the individual interpretation of each planning officer because of subjective expressions applied in the current commercial signage guidelines. This problem was also found in commercial signage controls applied in some North American cities studied by the researchers Arthur Stamps (2000) and Jack Nasar (1988).

Issue Six – Planning Applications to install New Signs

Shop owners should have to obtain the permission of local authorities to install any new commercial signs in historic city centres, so that the City Council can analyse whether these new media are appropriate for the historic context. According to the discussions in this book, a general commercial signage approach could recommend that physical aspects of new commercial signs such as size, shape, proportion, colour, fonts of texts, materials, relationship with surrounding areas and between signage and building form, be described and illustrated on planning applications. This recommendation is already implemented by the local authorities of the cities of Oxford and Gramado. However, in Pelotas this is usually not required by the Council. As a result, the findings from the empirical investigation showed that the visual pollution of the historic city centre of Pelotas is an increasing problem.

Issue Seven –Marketing the City and Urban Tourism Strategies

A general commercial signage approach should recommend that commercial signage controls promote the image of the historic city centre that residents desire to see, and help shop owners understand what will work to reinforce this image in terms of commercial signage design. This image should also be reinforced by the local authority through marketing the city and urban tourism strategies. The empirical investigation showed that in the city of Oxford, for example, commercial signage controls and marketing the city and urban tourism strategies are approached together to promote the city as a historic centre and a tourist destination attracting visitors, students, potential residents, and investors. This kind of approach was also identified in the cities of Rio de Janeiro, Sao Paulo, Sao Luiz, and Salvador in Brazil. Furthermore, this book highlighted that marketing the city and urban tourism strategies should influence the design and control of commercial signage with particular focus on the preservation of historic heritage. As found in the empirical investigation, historic buildings strongly influence resident satisfaction with the appearance of historic city centres in different urban contexts. In this regard, the image promoted by marketing the city and urban tourism strategies in historic city centres should emphasize the historic appearance of these centres, and not just their commercial functions.

Issue Eight – Local Guidance Document

A general commercial signage approach should recommend that each historic city has a local guidance document that explains how commercial signs can be

designed to preserve the visual quality and historic character of the place. This guide should be designed by the local authority with the involvement of the local community, civic societies, and private sectors. This initiative could help shop owners to understand how to design commercial signs in accordance with local legislation. In this guide, illustrations showing how a street facade in the city centre would look after the implementation of commercial signage controls can be used as a tool to convince shop owners to support regulations related to shopfronts and window displays.

In addition to those eight specific issues related to the operation of commercial signage controls mentioned above, this conclusion chapter highlights main aspects related to the operation of commercial signage controls, which need to be taken into account in the development of a general commercial signage approach. These were based on user perception and evaluation of commercial signage controls and city centre appearance, and are as follows:

A general approach to control commercial signage needs to take into account that users from different urban contexts, where different commercial signage controls are applied, agree that commercial signage controls are necessary in historic cities, they would like to participate in the development of these controls, and they believe that the appearance of buildings and commercial signs, historic buildings and places and number of commercial signs are relevant elements in the design of these controls. The findings also showed that user urban context influences perception and evaluation of the factors that should be considered in the development of commercial signage controls. It was demonstrated that a general commercial signage approach needs to recommend local authorities to investigate which physical aspects of commercial streetscapes should be taken into account in the development of local commercial signage controls according to residents' perceptions and evaluations of their city.

A general approach to control commercial signage needs to take into account that the way commercial signage controls are designed can influence how residents perceive and evaluate (i) city centre appearance, (ii) city centre functions, (iii) city centre image, and (iv) wayfinding. This book showed that the application of commercial signage controls improve the appearance of city centres: the satisfaction of users from different urban contexts with the appearance of city centres is higher where commercial signage controls are effective, the streetscape is ordered, and buildings are not harmed by commercial signs. As discussed in Chapter 1 and proved by the findings from the empirical investigation, one way to increase satisfaction of users from different urban contexts with the appearance of historic city centres is to promote order among commercial signs. The results also demonstrated that commercial signs are important features in historic city centres helping users to navigate through the centre in ordered places more than in disordered places.

The discussions presented in this work indicated that historic city centres are recognized by users as places of leisure, even when visual pollution is a problem.

The results pointed out that it happens in places where the historic city centres have concentrations of activities, which in general cannot be found in other areas of the city. This fact reinforces the importance of the social and economic role of city centres and the potential of these places to become pleasant leisure centres according to perception and evaluation of residents. As made clear by Chapter 3, users prefer to go to places seen as positive in terms of appearance. In this regard, a general commercial signage approach can contribute to the control of commercial signs and the promotion of city centres, already recognized as places of leisure, as areas evaluated positively in terms of appearance by users from different urban contexts.

The way in which commercial signage controls, and marketing the city and urban tourism strategies are approached influence how residents sum up city centre image. For example, Oxford city centre, where commercial signage controls protect the historic character of the city centre and the City Council is involved in promoting this area as a historic and tourist place, is recognized by users as a historic and tourist centre. At the same time, Gramado city centre, where commercial signage controls ignore the importance of historic buildings and the City Council is involved in promoting the city as the 'Brazilian Switzerland', is not recognized by users as a historic centre. According to residents, Gramado is a commercial and tourist area.

However, the findings from the empirical investigation showed that when the appearance of the city of Gramado is evaluated as a whole, historic buildings and places do influence user satisfaction. In this case, the commercial signage approach and the marketing the city and urban tourism strategies adopted in this city should consider these aspects, as they influence resident satisfaction. In this regard, a general commercial signage approach needs to emphasize the importance of protecting historic buildings and places in order to avoid the visual quality and character of historic city centres being associated with images which simply reflect commercial and tourist interests.

Findings from the empirical investigation indicated that the application of effective commercial signage controls make commercial signs be perceived and evaluated by residents as positive elements in historic city centres. The results also showed that effective commercial signage controls can increase user satisfaction with the appearance of historic city centres, and make the appearance of buildings, historic buildings and places valued as positive elements. In addition, aesthetic controls related to the appearance and number of commercial signs contribute to buildings and commercial signs becoming points of visual reference in historic city centres, helping wayfinding and making these centres attractive places. In this regard, a general commercial signage approach should recommend the design and implementation of commercial signage controls in historic city centres in order to (i) increase user satisfaction with the appearance of commercial signs and commercial streetscapes as a whole, and (ii) promote buildings and commercial sign as visual points of reference for users.

Results from the empirical investigation demonstrated that (i) user familiarity with streetscapes, (ii) symbolic meanings attributed to buildings by users, and (iii)

user urban context influence user perception and evaluation of the appearance of commercial streetscapes. In this regard, identification of how residents perceive and evaluate commercial streets in terms of the influence of these three non-physical variables on their responses should be the first analysis recommended in a general approach to the development of local commercial signage controls by local authorities in historic cities.

In conclusion of this section, this book identified factors that increase visual pollution in historic city centres, and should be used in the operation of commercial signage controls as negative scenarios that need to be avoided by local authorities in different urban contexts. The findings also described proposed actions to improve the appearance of historic city centres, which can be addressed as strategies to reduce visual pollution in historic city centres of different urban contexts already affected by this problem (see Table 7.3 in Chapter 7). These measures will help to convince shop owners and the local community to support the implementation of commercial signage controls.

Physical Characteristics of Commercial Signs and Buildings

Through the empirical investigation and literature review, this book identified a series of recommendations related to physical characteristics of commercial signs and buildings, which need to be taken into account in the development of a general commercial signage approach applicable to historic city centres. These were based on the common views found between users from the different urban contexts, and are as follows.

Order among commercial signs and preservation of historic buildings are fundamental requisites to have commercial streetscapes, in historic cities, perceived and evaluated positively by users from different urban contexts. This book showed that people from different urban contexts evaluate negatively street facades where commercial signage controls are ineffective and the streetscape is disordered and characterized by historic buildings harmed by shopfronts and window displays. On the other hand, users from different urban contexts evaluate positively commercial street facades where commercial signage controls are applied in order to preserve the historic character of the place and the streetscape is ordered and characterized by preserved historic buildings.

A comparison between the results from the analysis of user perception and evaluation of commercial street facades and the physical characteristics of these streets indicated that: a general approach to control commercial signage needs to take into account that the amount of street facade covered by commercial signs, the square metres of commercial signs per linear street metre, and the order among commercial signs influence user perception and evaluation of commercial streetscapes. This book showed that a small amount of street facade covered by commercial signs ($\leq 5.62\%$ of the street facade), 0.68 or less square metres of commercial signs per linear street metre, and ordered commercial signs are

physical characteristics of the street facades evaluated positively by users from different urban contexts. At the same time, a large amount of street facade covered by commercial signs ($\geq 9.11\%$ of the street facade), 0.85 or more square metres of commercial signs per linear street metre, and disordered commercial signs are physical characteristics of the street facades evaluated negatively by users from different urban contexts.

This book identified a series of physical characteristics of commercial streetscapes that influence perception and evaluation of users from the three cities analysed here in the same way. These combinations of physical characteristics can be used as guidelines by a general commercial signage approach in order to create policies to promote commercial streetscapes evaluated positively by users from different places and cultures.

- a. Visual pollution decreases user satisfaction more when associated with a (i) high variation of commercial signs and buildings, (ii) high percentage of street facade covered by commercial signs ($\geq 9.11\%$ of the street facade), (iii) high percentage of buildings harmed by these media ($\geq 33\%$ of buildings or 46% of a street facade), and (iv) high square metre of commercial signs per linear street metre ($\geq 0.85\text{ m}^2$ of signs per street metre).
- b. Users who prefer commercial streets characterized by preserved historic buildings do not sympathize with commercial streets characterized by contemporary buildings and commercial signs designed to create a manufactured character of a place. In this regard, in historic city centres, commercial signage control approaches which promote fake historic architecture or historical theme urban sites need to be avoided. In addition, commercial streetscapes characterized by a combination of disordered commercial signs, low variation of commercial signs and buildings, and historic buildings harmed by these media should also be banned in historic cities; according to users from different urban contexts, these streetscapes are evaluated as being worse than commercial streets characterized by fake historic architecture.
- c. Commercial streetscapes characterized by a mix of historic and ordinary buildings influence perception and evaluation of users in a positive way, mainly when ordinary buildings are designed with regard to the features of historic buildings, such as height and proportion of windows and doors.
- d. A combination of a high percentage of street facade covered by commercial signs ($\geq 9.11\%$ of the street facade) and a high percentage of buildings harmed by these media ($\geq 33\%$ of buildings or 46% of a street facade) is perceived as less negative than a combination of a high value of square metres of commercial signs per linear street metre ($\geq 0.85\text{ m}^2$ of signs per linear street metre) and a high variation of buildings and commercial signs. This result reinforces the importance of defining a maximum limit of square metre value of commercial signs per linear street metre, and the

necessity to apply controls related to the variation of commercial signs and buildings in historic city centres.

- e. Physical features related to the visual character of commercial street facades, such as building style, roof line, presence of vegetation and spaces between buildings, influence user perception and evaluation of commercial streetscapes. In this regard, a general commercial signage approach should recommend that before local authorities begin to design commercial signage regulations, they need to evaluate the influence of the actual visual character of commercial streetscapes on user perception and evaluation.
- f. Commercial streetscapes mainly characterized by historic buildings influence positively user perception and evaluation, even when visual pollution is evident. In this regard, the preservation of these buildings is one of the most important issues that should be considered in the development of commercial signage controls.

A general commercial signage approach needs to take into account appearance of buildings and commercial signs, historic buildings, and number of commercial signs as the most relevant aspects that influence user perception and evaluation of commercial streetscapes. This discussion presented in this book also demonstrated that user urban context influences the importance attributed by users to some of those aspects. For example, the presence of historic buildings is more important for users from Oxford, where the streetscape is characterized by preserved historic buildings, while the number of commercial signs is more important for users from Brazil, where the majority of historic city centres are harmed by an excessive number of commercial signs. In this regard, a general approach to control commercial signage in historic city centres should clarify that, for each particular urban context, specific aspects need to be given more attention in order to optimize residents' perception needs. This general approach should recommend local authorities to investigate which physical characteristics of commercial streetscapes most influence the perception and evaluation of residents. Having this knowledge as a starting point, these authorities can manage these features to reinforce the visual quality and character of places.

The physical characteristics of commercial signs and buildings identified in Chapter 7 (see summary in Table 7.3) can be used in a general commercial signage approach as guidelines to help national, regional and local authorities from different urban contexts to design local commercial signage controls. These guidelines can help to promote historic city centres be perceived and evaluated positively by users from different urban contexts.

As supported by the literature review, the results confirmed that streetscapes where commercial signage controls are ineffective are evaluated as ugly, boring, and disordered by users from different cultural background. On the other hand, streetscapes where commercial signage controls are effective are evaluated as beautiful, interesting, and ordered by users from different cultural background. These findings demonstrated that the development and application of a general

commercial signage approach to historic city centres can help to increase user perception and evaluation of beauty, interest, and order in relation to the appearance of commercial streetscapes in different urban sites.

In terms of user perception and evaluation of colour variation and complexity, there were no standard views: commercial street facades evaluated positively and negatively in terms of appearance can be perceived as having high or low colour variation and complexity. At the same time, the findings also demonstrated that high colour variation and high complexity are recognized as negative features of commercial streetscapes when commercial signage is disordered. Moreover, a general commercial signage approach needs to take into account that the level of colour variation and complexity should be controlled according to the physical characteristics of each particular place. This control will help to preserve the visual quality and local character of city centres, and promote interesting and ordered streetscapes. A general commercial signage approach should take into account that users from different urban contexts tend to perceive similarity as simplicity in terms of commercial streetscapes. Streetscapes comprising buildings similar in visual character and architectural style tend to be evaluated as not complex, even when the variation of physical characteristics of their buildings is high. In this regard, when the level of commercial signage and building variation of street facades is analysed, a general commercial signage approach needs to clarify this issue for local authorities.

A general commercial signage approach applicable to historic city centres should recommend a chromatic analysis of commercial street facades. Assuming that colour can be used to strengthen the image of historic places by giving emphasis to features such as landmarks, this approach can suggest that, before the design of commercial signage controls, local authorities need to analyse the colour variation of commercial streetscapes and investigate whether users are satisfied with this. This approach needs to also point out that users from different urban contexts can have distinct tolerances to colour variation. People who live in cities where high colour variation is predominant in the streetscape tend to be less sensitive to certain chromatic combinations. For example, in a street facade the combination of blue-purple hues in cold and light colours, green-yellow hues in cold and medium colours, brown-red hues in hot and light colours (see Plate 4b) and monochromatic harmony (see Table 1.2 in Chapter 1) tend to increase the perception and evaluation of colour variation of users from the city of Oxford more than of users from the Brazilian cities, Pelotas and Gramado.

This book identified that different chromatic combinations (taking commercial signs and buildings as a group) have distinct influences on user perception and evaluation of commercial streetscapes. According to the perception and evaluation of users from the different cities here studied, (i) brown-red hues in hot and light colours and monochromatic harmony or harmony by light-dark contrast tend to decrease colour variation, while (ii) yellow-orange hues in hot and medium colours and harmony by light-dark contrast tend to increase colour variation. The results from this study also showed that brown-red hues in hot and light colours

and harmony by contrast can divide users between those who perceive a more colourful or colourless streetscape. In this regard, certain chromatic combinations should be encouraged in city centres if the aim of the local authority is to increase the colour variation of these places.

Level of variation of commercial signs and buildings should be taken into account in the development of a general commercial signage approach to historic city centres. The findings from the empirical investigation demonstrated that by decreasing commercial signage variation, user satisfaction with the appearance of commercial street facades and user perception and evaluation of beauty, interest, and order increase as well. At the same time, variation of commercial signs and buildings should be taken into account in a general commercial signage approach as a group as there is a relationship between user perception and evaluation of these variables, where the higher user perception and evaluation of commercial signage variation, the higher user perception and evaluation of building variation.

This book also showed that user perception and evaluation of commercial signage variation can increase with the high variation of one or more of the following aspects of signs: size, arrangement in relation to facades, location on facades, presence of images, size of letters and images in relation to size of sign background, lettering size, and number of chromatic groups. In addition, user perception and evaluation of building variation can increase with the high variation of one or more of the following aspects of buildings: number of turns in silhouette perimeter, width of buildings, facade details, fenestration on facades, overall proportion of windows and doors, presence of horizontal or vertical partitions on facades, and colour. As these physical characteristics seem to influence user perception and evaluation of commercial signage and building variation more than others, they need to be highlighted in commercial signage design guidelines in order to control complexity levels in commercial streetscapes with regard to views of users from different cities and cultures.

The method applied here to calculate complexity of commercial streetscapes (Appendix D) by analysing the variation of commercial signs and buildings produced results which converged with user perception and evaluation of complexity when the commercial street facades were evaluated. This method can be integrated into a general commercial signage approach in order to monitor levels of complexity of commercial street facades in historic city centres. The results from the application of this method can help to identify whether new commercial signs or buildings will increase the complexity of a street facade too much, before the new signs or buildings are displayed or built in a historic city centre. For example, if the results from this method show that the complexity of a commercial street facade will increase too much with the insertion of a new commercial sign, the local authority will have strong justification to ask the shop owner to re-design the sign. The application of this method can contribute to (i) preserve the historic heritage of historic city centres, and (ii) increase user satisfaction with these places.

Findings showed that user perception and evaluation of the percentage of building facades covered by commercial signage influence user satisfaction with

the appearance of commercial streets. According to common views found between users from different urban contexts, a general commercial signage approach to historic city centres should recommend the maximum percentage of building facades, which can be covered by commercial signs. This recommendation can guarantee that the percentage of building facades coverage by these media does not interfere with user satisfaction with the appearance of commercial streetscapes. Taking into account the results from the focus group discussion, a maximum of 3% of each building facade covered by commercial signs can be taken as an acceptable limit for historic city centres. This general approach needs to control the coverage of building facades by commercial signs in order to increase user evaluation of beauty and order in historic city centres.

Moreover, the evidence showed that, in a street facade when almost all shopfronts are located in similar zones of the facades of different building, user perception and evaluation of the percentage of building facades covered by commercial signs decrease. In this regard, a general commercial signage approach to historic city centres needs to take into account as a major issue the location of commercial signs on building facades.

This book also showed that user perception and evaluation of the number of commercial signs and the percentage of building facades covered by these media influence user perception and evaluation of buildings and commercial signs in commercial street facades. For example, when user perception and evaluation of the number of commercial signs and the percentage of building facades covered by these media is low, buildings and commercial signs are evaluated as positive features of commercial streetscapes. On the other hand, when user perception and evaluation of the number of commercial signs and the percentage of building facades covered by these media is high, commercial signs are evaluated as negative features of commercial streetscapes.

This work identified six relationships between commercial signs and buildings recognized by users from different urban contexts as 'buildings harmed by these media': (i) commercial signs covering totally or partially elements of building silhouette, facade details, and/or facade articulation, (ii) disconnection between building ground floor and upper floors due to design of commercial signs and layout of shops in the ground floor, (iii) posters in bright colours covering shop windows, (iv) shopfronts not separated enough from building facades, so they do not get people's attention, (v) commercial signs painted on blank lateral walls of buildings, and (vi) aesthetic composition of building facades fragmented by commercial signs and/or colours. At the same time, the findings showed that the commercial street facades chosen as the best in terms of appearance can have buildings harmed by commercial signs but these are 'very few' and 'few', while the commercial street facades chosen as the worst in terms of appearance have buildings harmed by these media and these are 'very many' and 'many'. User perception and evaluation of buildings harmed by commercial signs need be decreased in order to not affect user satisfaction with the appearance of commercial streetscapes. Consequently, those six situations, mentioned above, recognized

by users from different urban contexts as ‘buildings harmed by signs’ can be integrated into a general commercial signage approach as scenarios that must be avoided in historic city centres.

In commercial street facades evaluated positively in terms of appearance, commercial signs make historic buildings ‘neither beautiful nor ugly’, while in commercial street facades evaluated negatively in terms of appearance, commercial signs make historic buildings ‘very ugly’ and ‘ugly’. In addition, it was found that users from different cities and countries perceive and evaluate as negative the influence of commercial signs on historic buildings previously recognized as harmed. In this regard, the criteria adopted in this book to identify buildings harmed by commercial signs¹ can be used in a general commercial signage approach as a guide to help local authorities in the design of commercial signage controls. This approach should also recommend that shopfronts and window displays need to be designed not to interfere with the aesthetic composition of historic buildings; the effect of these media on these buildings should be neutral. Furthermore, this general approach needs to highlight that when commercial signs do not harm historic buildings and their surrounding areas, buildings and commercial signs are recognized as positive features of commercial streetscapes by users from different cities and cultures.

Common Perceptions between Users from Different Cultures

Common perceptions and evaluations were found between users from different cities and cultures in terms of commercial signage controls, city centre appearance, city centre functions, city centre image, wayfinding through commercial signs, and appearance of commercial street facades. Taking the evidences presented in this book, the main findings can be highlighted in four items as follow:

1. Users from the case studies where commercial signs are ordered and do not harm building facades (cities of Oxford and Gramado) and residents in Pelotas case study, where commercial signs are disordered and harm historic buildings, share the same perceptions and evaluations in terms of the appearance of commercial street facades located in Pelotas; these streets were perceived and evaluated negatively by them. This fact supports the idea that universal views between users from different cities and cultures exist in terms of perception and evaluation of the appearance of commercial streetscapes. In this regard, the development of a general commercial signage approach, which helps national, regional and local authorities of different urban contexts design and implement commercial

1 Harmed buildings are considered to be the ones where commercial signs cover and/or damage elements related to facade silhouette, facade details, and/or facade articulation.

signage controls, is an essential initiative that should be integrated into principles defined by urban design theories.

2. When the appearance of commercial street facades was evaluated, common views were found between users from different cities and cultures in terms of the positive and negative physical characteristics of commercial signs and buildings. This book showed that the majority of users from the three case studies indicated the same buildings as the one they like the most and the one they like the least due to the relationship between commercial signs and building facades. The factors related to these common views, which were presented in Chapter 7 and summarized in Table 7.3, should be considered as an important material to develop design guidelines to a general commercial signage approach in order to help the development of local commercial signage controls.
3. When the appearance of commercial street facades was evaluated, this book found common perceptions and evaluations between lay people and professionals from different urban contexts. At the same time, a manufactured street character promoted by contemporary buildings and commercial signs tends to be more popular with lay people than with professionals. These latter users tend to prefer streets characterized by historic buildings, even when these buildings are harmed by commercial signs.
4. The findings also confirmed that users, when evaluating the appearance of commercial streetscapes, can be influenced by three non-physical variables: (i) user familiarity with streetscape, (ii) symbolic meanings attributed to buildings, and (iii) user urban context. The influence of these aspects on user responses were mainly noted when residents evaluated the commercial streets of their city. These variables should be taken into account by the local authority in the development of commercial signage controls. In addition, it was found that people who live in different places can have different levels of tolerance to variation of physical characteristics of commercial signs and buildings. In this sense, a general commercial signage approach to historic city centres should recommend that local regulations related to the control of commercial signage and building variation needs to take into account residents' perceptions and evaluations. Having identified, for example, the most appropriate level of commercial signage and building variation according to residents' perceptions and evaluations, local authorities are well placed to design commercial signage controls.

To conclude, the findings confirmed the following general assumption: While some visual preferences in the built environment may be influenced by the user's urban context, others (universals) may be common to the majority of people from different countries and may be useful in defining general principles that guide preference and satisfaction.

Theoretical and Original Contribution to the Knowledge

The importance of the findings presented here is justified in its concern with the issue of the control commercial signs in historic city centres of different countries in order to create commercial streetscapes perceived and evaluated positively by users from different backgrounds. The search for common views between users from different cities and cultures in terms of perception and evaluation of commercial signage controls, historic city centres, and commercial street facades, helps to identify factors that should be taken into account in the control of these media. These factors, summarized in the above sections, form the theoretical background to the development of a general commercial signage approach, which can help national, regional, and local authorities design and implement commercial signage controls in historic sites. The idea of a general commercial signage approach for different urban contexts did not ignore the fact that each place has its own particularities. The role of this approach is to recommend (i) general guidelines related to the operation of commercial signage controls, and (ii) design principles of commercial signs and buildings that create commercial streetscapes evaluated positively by different users at the same time. In this regard, the discussion in this book helps in the combat of visual pollution caused by shopfronts and window displays in historic city centres already damaged by this problem, and in the prevention of this issue in historic city centres in the future.

This book provides evidence for further theoretical discussions in the Environment Behavioural research field. The findings demonstrated that some visual preferences, related to commercial streetscapes, were based on the process of user perception (perceptual constancy) more than on the process of user cognition. This is because standard judgements related to the appearance of commercial streetscapes were found between users from different urban contexts and cultural backgrounds. In this regard, this book has begun to fill the gap in the literature of what relates the operation of commercial signage controls and the physical characteristics of commercial streetscapes to the perception and evaluation of users from cities and cultures. It was proved that there are universal perceptions among users from different cities, countries, and user groups (lay people and professionals) in relation to the aesthetic composition of commercial streetscapes. Very few studies of user preference and satisfaction in relation to the appearance of commercial streetscapes have been conducted by researchers, with the exception of Nasar (1988) and Nasar and Hong (1999); but these works were based on individual case studies. The theoretical and original contribution to knowledge here lies in its combination of methods and techniques of data collection and analysis used to answer the study questions through an empirical investigation carried out in three cities located in two different countries.

The results also showed that few visual preferences are also related to the process of user cognition. Some user responses in relation to commercial streetscapes were influenced by professional background, resident familiarity with particular streetscapes, symbolic meaning attributed to buildings, and user urban contexts. In

this sense, these non-physical variables cannot be ignored in the design of commercial signage controls. These variables need to be accommodated in any design process in order to create successful urban spaces based on user evaluation.

In terms of colour variation, this book developed a method to analyse and classify colours of commercial signs; colours of letters and sign backgrounds were grouped into categories according to their hues, saturation, and temperature. Similar approach was already applied by other researchers when analysing building facades (such as by Jean-Philippe Lenclos and Dominique Lenclos), but this book is the first piece of scientific work where this kind of approach is used in the study of the colour of shopfronts and window displays. The chromatic contrast between letters and sign backgrounds was also analysed through the identification of four different levels of contrast (see Table 1.2 in Chapter 1). It is hoped that the theoretical concepts and methods developed and applied here to analyse the effects of colour on user perception and evaluation of commercial streetscapes help further studies and discussions in the topic of visual pollution caused by commercial signs.

It will be interesting to develop further investigations into the subject of visual pollution in order to explore how commercial signage controls should be approached in city centres where the historic component is not a dominant issue. Application of the same methodology used here in places where the visual character of commercial streetscapes is mainly carried or deliberately constructed through commercial signage, such as in Las Vegas, Times Square in New York, and Hong Kong, will probably produce different results from the ones verified here. In these cases, the signage itself constitutes the architecture, and therefore different issues related to the operation of commercial signage controls should be taken into account in such places.

In conclusion, we need to fight to avoid that our cities become the contemporary Tower of Babel, portrayed in the front cover of this book. I hope that all discussions presented in this piece of work can help future studies in the theme of visual pollution taking into account the importance of preserving our historic heritage to the next generations, our sons and grandsons, guaranteeing in this way the whole environmental quality.

APPENDIX A

Architectural Styles of Buildings

The architectural styles classified in this book are based on the analysis of physical features of building facades of different periods of the architectural history of England and Brazil:

1. Modern or International Style: building facades characterized by simple parapet, no facade details, horizontal and vertical planes, use of glass and steel, use of concrete, no decoration, and denial of mass.

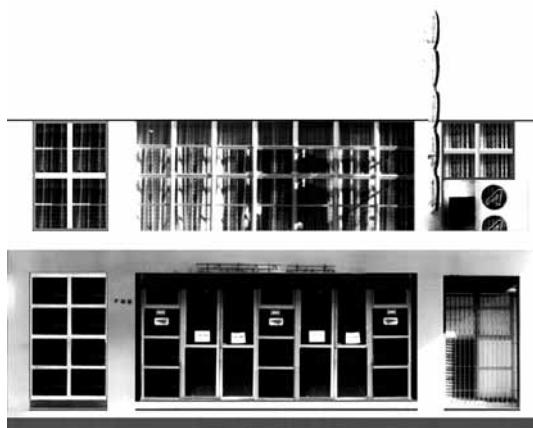


Figure A.1 Modern or International Style buildings (Source: author)

2. First Modern Period: building facades characterized by simple parapet, horizontal and vertical bands, and large window areas made up of regularly repeated units of smaller rectangular windows.



Figure A.2 First Modern Period buildings (Source: author)

3. Art Deco: building facades characterized by parapet with round and geometric bands, rounded corners, rounded corners that abruptly become planar walls, rectangular windows, horizontal bands of jutting material, and vertical bands.



Figure A.3 Art Deco building (Source: author)

4. Second Eclectic Period or Art Nouveau: building facades characterized by depiction of leaves and flowers in flowing lines, sinuous lines, window and door frames, cornices, parapet with geometric decoration, and decorative horizontal and/or vertical bands, rounded corners.



Figure A.4 Second Eclectic Period or Art Nouveau buildings
(Source: author)

5. Eclectic or Neo-Classical: building facades characterized by engaged pilasters, window and door frames, decorative draws, bands and frames, decorative railing, balustrade with eclectic draws, tall parapets or balustrades with central features, such as domes, projecting facades and/or pavilions, and facade details including garlands, wreaths, cartouches and/or human statuary.



Figure A.5 Eclectic or Neo-Classical building. (Source: author)

6. Georgian: building facades characterized by hip roof and parapet with cornice, sometimes terraces, window and door frames, windows with double-hung sashes having many small panes separated by thick wooden muntins, windows aligned horizontally and vertically in symmetrical rows, and cornice usually emphasized by decorative moldings, most commonly with tooth-like dentils.



Figure A.6 Georgian building. (Source: author)

7. Georgian with visible roof and dormer windows: the same as Georgian, but with hip roof or sloping roof visible, dormer windows, and lateral chimneys.



Figure A.7 Georgian with visible roof and dormer windows building (Source: author)

8. Building Stone: building facades characterized by window and door frames, decorative bands and frames, sloping roof with dormer windows, maybe lantern, parapet with or not geometric decorations, decorative gable, and stone revetment.

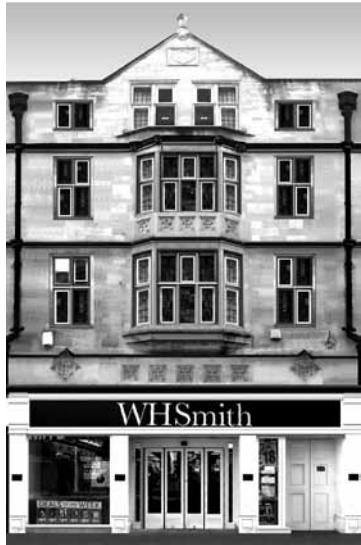


Figure A.8 Building Stones (Source: author)

9. Medieval or Tudor: building facades characterized by decorative half-timbering on top floor, prominent cross gables, narrow windows, small windowpanes, central chimney, gable with windows, simple bargeboard, pargetting; chimney-stack, and sloping roof with or not dormer windows.



Figure A.9 Medieval or Tudor building (Source: author)

10. Medieval or Tudor with apparent timber-framing: building facades characterized by timer-framing, steeply pitched roof, prominent cross gables, narrow windows, small windowpanes, and decorated bargeboard.



Figure A.10 Medieval or Tudor with apparent timber-framing building (Source: author)

11. Neo-Bavarian or Tourist Architecture: building facades characterized by decorated bargeboard, brackets, decorative gable and pent roof, texture created by wood revetment, railing with geometric draws, maybe decorative timber-framing, usually wooden revetment on walls, and wooden railing.



Figure A.11 Neo-Bavarian or Tourist Architecture building (Source: author)

12. Contemporary Box: building facades characterized by simple parapet or parapet with partial crow-step, marquise, different materials of revetment, balconies, different window and door styles, and usually they look like a box mainly because of the shape of the roofline (simple parapet) and the building proportion.



Figure A.12 Contemporary Box buildings (Source: author)



Figure A.12 Contemporary Box buildings (Source: author)

13. Contemporary: building facades characterized by sloping roof, hip roof, sometimes cornice, weatherboard, and usually they are family houses built between 1960–1980 and converted to comprise shop activities and residence.



Figure A.13 Contemporary buildings (Source: author)

APPENDIX B

General Physical Characteristics of the Commercial Streets in Oxford, Gramado and Pelotas

Street 1: City of Oxford (UK) – High Street



General characteristics:

- Number of commercial signs: 46 shopfronts and window displays.
- Percentage of street facade covered by these media: 2.70% ($34.60m^2$).
- Number of buildings harmed by commercial signs: none.
- Square metres of commercial signs per linear street metre: $0.31m^2/m$.
- Order and level of complexity in terms of commercial signs and buildings: ordered streetscape and the second highest complex street in the sample.
- Visual character: this street has the highest number of historic buildings in the sample. The styles of buildings are classified as – Medieval/Tudor, Medieval/Tudor with apparent timber framing, Building stone, Georgian, and Georgian with visible roof and dormer windows and Art Deco (see Appendix A). The majority of buildings have three and four storeys; 50% of buildings have hip roof with dormer windows; and they are symmetric in terms of aesthetic composition of facades.
- Colour: in terms of building facades, this street is mainly characterized by brown to red hues in hot and light colours and harmony by contrast (see Plates 4a, 4b, 4c).

Street 2: City of Oxford (UK) – Cornmarket Street



General characteristics:

- Number of commercial signs: 25 shopfronts and window displays.
- Percentage of street facade covered by these media: 5.62% (54.56m²).
- Number of buildings harmed by commercial signs: none.
- Square metres of commercial signs per linear street metre: 0.68m²/m.
- Order and level of complexity in terms of commercial signage and buildings: ordered streetscape and the second lowest complex street in the sample.
- Visual character: this street has the third highest number of historic buildings in the sample. The styles of buildings are classified as – Building stone, Modern, First period modern, Georgian and Medieval/Tudor with apparent timber-framing (see Appendix A). The majority of buildings have three and four storeys; 50% of buildings have flat roof and another 50% have hip roof with gable. Because of the dimensions (width) of buildings with flat roofs, this type can be perceived as more predominant. The majority of buildings are symmetric in terms of aesthetic composition of facades.
- Colour: in terms of building facades, this street is mainly characterized by white, brown to red hues in hot and light colours and harmony by light-dark contrast (see Plate 4a, 4b, 4c).

Street 3: City of Gramado (Brazil) – Borges de Medeiros Avenue

General characteristics:

- Number of commercial signs: 39 shopfronts and window displays.
- Percentage of street facade covered by these media: 3.48% (30.54m²).
- Number of buildings harmed by commercial signs: 1 (4% of street facade = 36.51m²).
- Square metres of commercial signs per linear street metre: 0.25m²/m.
- Order and level of complexity in terms of commercial signage and buildings: ordered streetscape and the third highest complex street in the sample.
- Visual character: this street has one building from the first period of the city. The styles of buildings are classified as – Neo-Bavarian or Tourist architecture, and Contemporary (see Appendix A). The majority of buildings have one and two stories, while the buildings at the corners have three and five floors. The majority of buildings have hip roof with gable, and they are symmetric and partial symmetric in terms of aesthetic composition of facades.
- Colour: in terms of building facades, this street is mainly characterized by yellow to orange hues in hot and medium colours and harmony by light-dark contrast (see Plate 4a, 4b, 4c).

Street 4: City of Gramado (Brazil) – Borges de Medeiros Avenue

General characteristics:

- Number of commercial signs: 37 shopfronts and window displays.
- Percentage of street facade covered by these media: 6.28% (58.08m²).
- Number of buildings harmed by commercial signs: 2 (35% of street facade = 319.41m²).
- Square metres of commercial signs per linear street metre: 0.50m²/m.
- Order and level of complexity in terms of commercial signage and buildings: ordered streetscape and the highest complex street in the sample.
- Visual character: this street has two buildings from the first period of the city. The styles of buildings are classified as – Neo-Bavarian or Tourist architecture, and Contemporary (see Appendix A). 40% of buildings have three and four storeys. The majority of buildings have hip roof with, or not, gable, and they are symmetric and partial symmetric in terms of aesthetic composition of facades.
- Colour: in terms of building facades, this street is mainly characterized by white, brown to red hues in hot and light colours and harmony by light-dark contrast (see Plate 4a, 4b, 4c).

Street 5: City of Pelotas (Brazil) – General Osorio Street

General characteristics:

- Number of commercial signs: 20 shopfronts and window displays.
- Percentage of street facade covered by these media: 11.31% (79.97m²).
- Number of buildings harmed by commercial signs: 4 (56% of street facade = 397.96m²).
- Square metres of commercial signs per street metre: 0.85m²/m.
- Order and level of complexity in terms of commercial signage and buildings: disordered streetscape and the lowest complex street in the sample.
- Visual character: this street has the second highest number of historic buildings. The styles of buildings are classified as – Eclectic, Contemporary box, and Art nouveau (see Appendix A). The majority of buildings have one and two storeys, flat roof and they are symmetric and partial symmetric in terms of aesthetic composition of facades.
- Colour: in terms of building facades, this street is mainly characterized by white, yellow to orange hues in hot and medium colours, and brown to red hues in hot and light colours and harmony by contrast (see Plate 4a, 4b, 4c).

Street 6: City of Pelotas (Brazil) – Sete de Setembro Street.

General characteristics:

- Number of commercial signs: 40 shopfronts and window displays.
- Percentage of street facade covered by these media: 9.11% (93.34m²).
- Number of buildings harmed by commercial signs: 2 (46% of street facade = 470.18m²).
- Square metres of commercial signs per linear street metre: 0.85m²/m.
- Order and level of complexity in terms of commercial signage and buildings: disordered streetscape and the third lowest complex street in the sample.
- Visual character: this street has the third highest number of historic buildings. The style of buildings are classified as – Eclectic, Contemporary box, Art deco and Art nouveau (see Appendix A). The majority of buildings have two and three storeys, flat roof, and they are symmetric and partial symmetric in terms of aesthetic composition of facades.
- Colour: in terms of building facades, this street is mainly characterized by blue to purple hues in cold and light colours, green to yellow green hues in cold and medium colours, and brown to red hues in hot and light colours and monochromatic harmony (see Plates 4a, 4b, 4c).

APPENDIX C

Geographic Location of the Streets in Oxford, Gramado and Pelotas

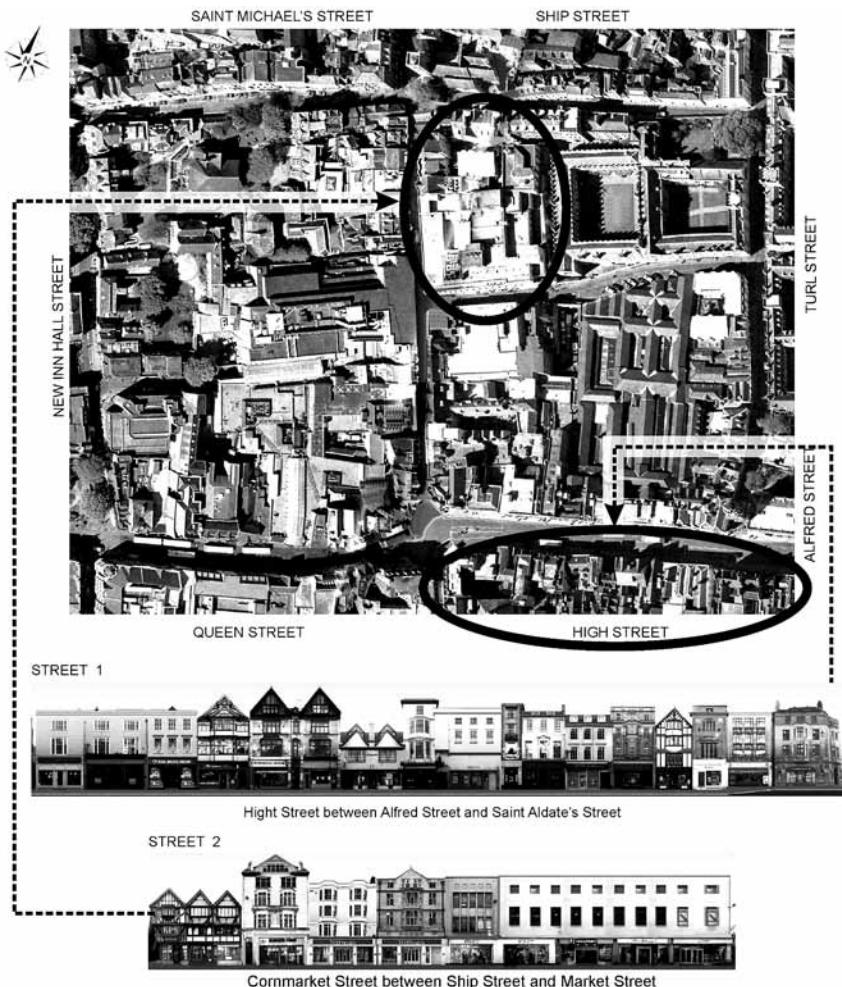


Figure C.1 Geographic location of the streets in Oxford, in England (Source: author)

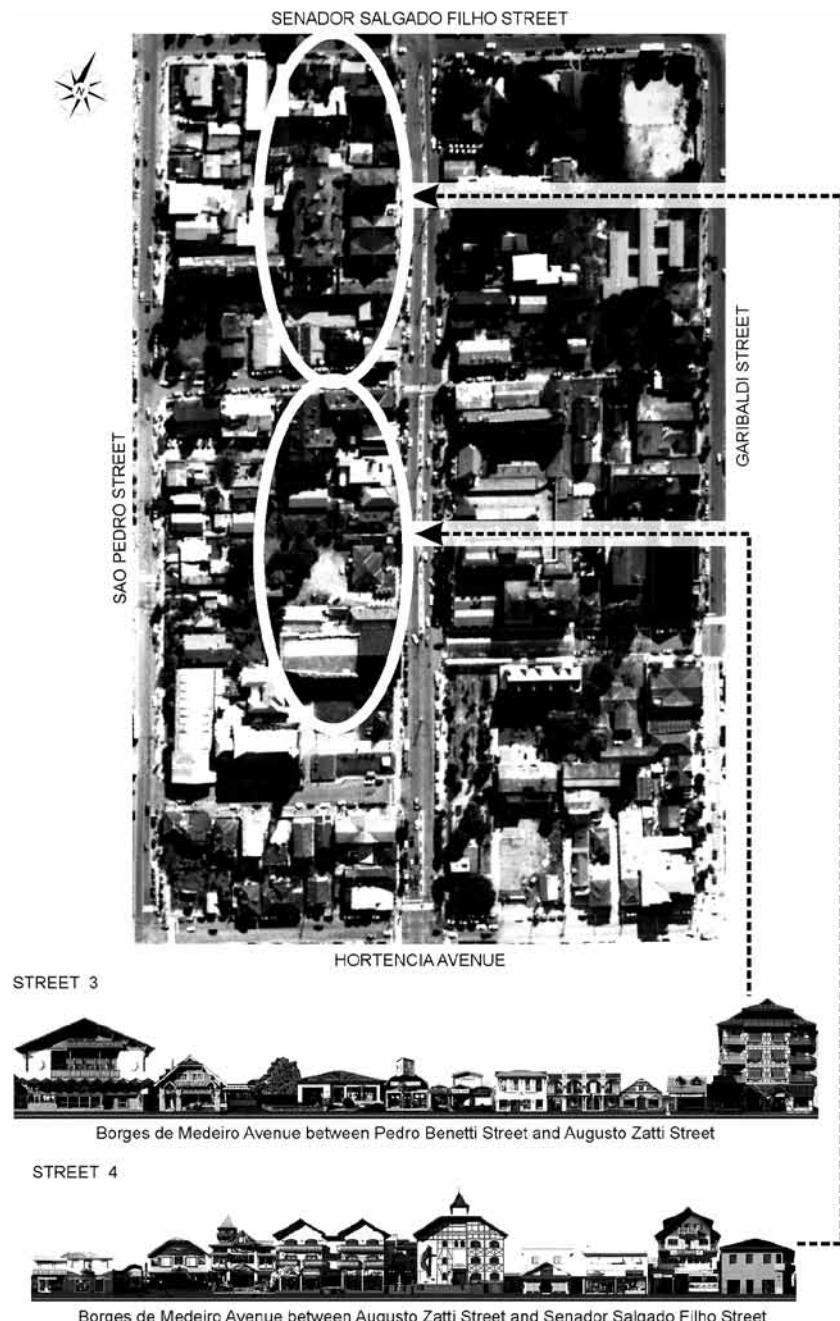
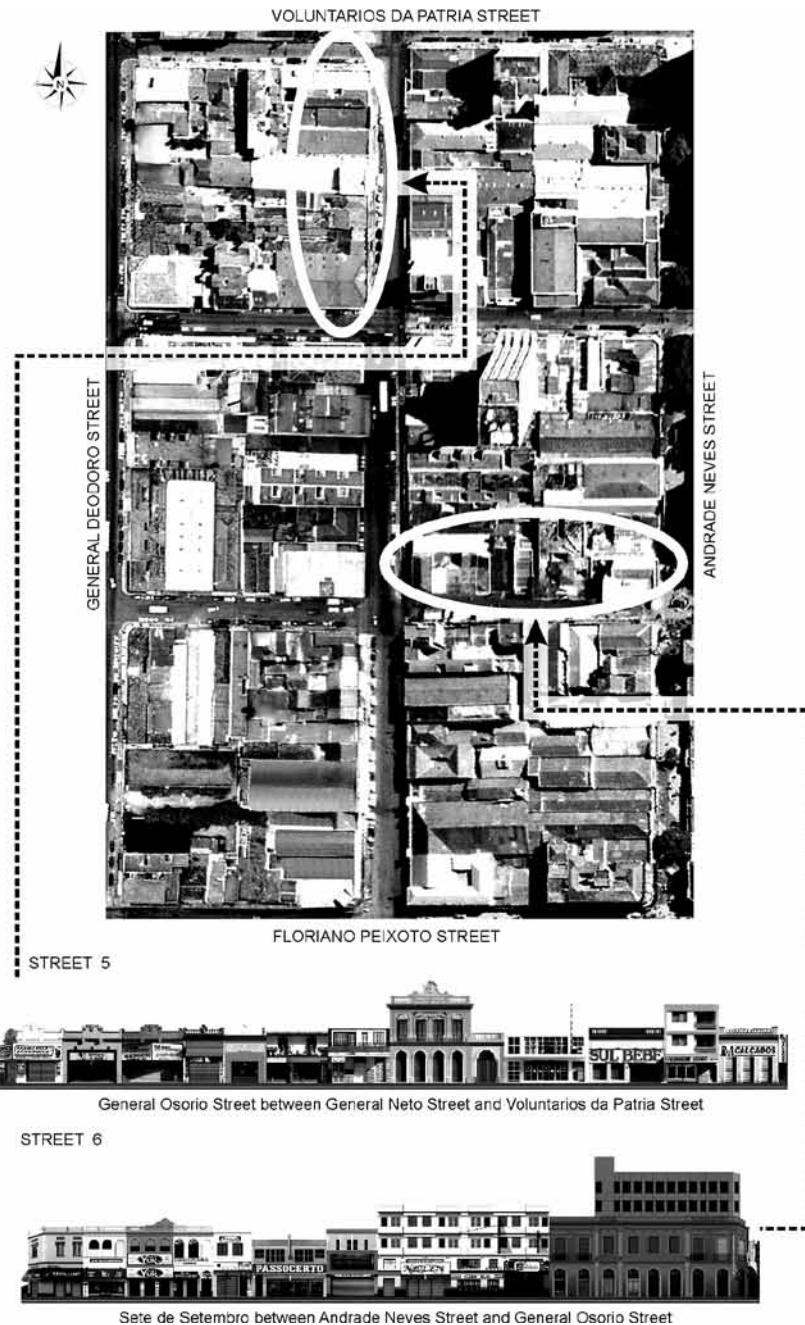


Figure C.2 Geographic location of the streets in Gramado, in Brazil (Source: author)



**Figure C.3 Geographic location of the streets in Pelotas, in Brazil
(Source: author)**

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APPENDIX D

Method Applied to Calculate Complexity – the Complexity Method

As discussed in Chapter 1, here the concept of complexity is related to the variation of physical characteristics of commercial signs and buildings in an aesthetic configuration governed by an overall principle. Taking into account the street facades studied in the empirical investigation of this book, the results from the method applied to calculate complexity indicate levels of commercial signage and building variation, which are related to complexity in streets 1, 2, 3 and 4. On the other hand, in streets 5 and 6, the findings from the application of this method just inform the levels of variation of commercial signs and buildings without relating these with the concept of complexity. It is because both these streets are disordered.

The physical aspects taken into account to calculate commercial signage variation are: (i) size; (ii) shape; (iii) number of chromatic groups; (iv) chromatic contrast between letters and sign background; (v) proportion; (vi) arrangement in relation to facade; (vii) types of signs (letters fixed on walls, frames, posters and so on); (viii) location on facade; (ix) presence of images; (x) type of lettering style; (xi) predominant lettering style; (xii) size of letters in relation to size of sign background; (xiii) size of images in relation to size of sign background; and (xiv) lettering size (height). The final level of commercial signage variation of each street is shown in Table D.1. The numbers 1 to 6 correspond to the order in which the streets are classified with regard to the variation of commercial signs. For example, analysing the size of commercial signs, the street classified as number 1 (street 5) has the highest variation of this aspect, while the street classified as number 6 (street 1) has the lowest variation.

To calculate building variation, the following physical aspects are taken into account: (i) building silhouette; (ii) facade details; (iii) facade articulation; (iv) visual character; and (v) colour variation of building facades.

The following aspects of building silhouette are taken into account to calculate building variation: (i) symmetry of shape perimeter (street as a whole); (ii) number of vertexes (street as a whole); (iii) number of turns in shape perimeter (street as a whole); (iv) symmetry of shape perimeter with regard to roofline of buildings; (v) height of buildings; (vi) width of buildings; and (vii) building crowning. Table D.2 shows the variation of these aspects in each street facade in the sample. In this table, the numbers 1 to 6 correspond to the order in which the streets are classified with regard to the level of variation: for example, analysing the number of turns in shape perimeter, the street categorized as number 1 (street 4) has the highest variation of

Table D.1 Final level of commercial signage variation

Streets	Physical characteristic of commercial signs													Final level of commercial signage variation*		
	Size	Shape	Number of chromatic groups	Chromatic contrast between letter and sign backgrounds	Proportion	Arrangement in relation to facade	Types of sign	Location on facade	Presence of images	Type of lettering style	Predominant lettering style	Size of letters in relation to size of sign background	Size of images in relation to size of sign background	Lettering size		
Street 4	4	6	1	3	4	6	2	2	1	1	1	3	3	5	38	The highest variation
Street 6	2	1	2	5	4	3	4	1	4	2	4	1	6	2	39	
Street 1	6	2	2	2	2	4	1	4	5	3	3	4	5	6	43	
Street 3	5	3	2	6	3	2	3	3	2	4	6	2	4	4	44	
Street 2	3	4	3	1	1	5	5	5	6	5	2	6	2	3	48	
Street 5	1	5	1	4	5	1	6	6	3	6	5	5	1	1	49	The lowest variation

*This is the sum of all numbers in each row: the lower the value, the higher commercial signage variation. If more than one street has the same numeric classification it means these streets have the same level of variation.

Table D.2 Level of variation of building silhouette

Streets	Elements related to building silhouette							Final level of variation of building silhouette *
	Symmetry of shape perimeter (street as a whole)	Number of vertexes (street as a whole)	Number of turns in shape perimeter (street as a whole)	Symmetry of shape perimeter in terms of building rooflines	Height of buildings	Width of buildings	Building crowning	
Street 4	1	1	1	1	1	2	3	10
Street 1	2	2	2	4	5	6	1	22
Street 3	3	5	3	2	3	1	6	23
Street 6	2	4	6	3	2	4	4	25
Street 2	2	4	5	6	4	5	2	28
Street 5	3	3	4	5	6	3	5	29



* This is the sum of all numbers in each row: the lower this value, the higher silhouette variation. If more than one street has the same numeric classification, it means that these streets have the same level of variation.

this aspect, while the street classified as number 6 (street 6) has the lowest variation. It is important to note that when symmetry of shape perimeter (street as a whole) is analysed, three levels of variation are considered: (i) level 1 – silhouette of street facade has high variation (main turns on shape perimeter ≥ 6); (ii) level 2 – silhouette of street facade has variation but some similarity can be noted (main turns on shape perimeter ≤ 5); and (iii) level 3 – silhouette of street facade has few variation and looks almost symmetric (main turns on shape perimeter < 4).

With regard to facade details, the following elements are taken into account to calculate the variation of each street: (i) types of details; (ii) number of buildings with details; (iii) architectural style; and (iv) texture of revetments. Table D.3 shows the variation of facade details in each street. In this table, the numbers 1 to 6 correspond to the order that the streets are classified with regard to the variation of facade detail: for instance, analysing types of details, the street categorized as number 1 (street 3) has the highest variation of this aspect, while the street categorized as number 6 (street 6) has the lowest variation.

Regarding facade articulation, the following aspects are taken into account to calculate the variation: (i) size of facades; (ii) fenestration (number of windows and doors); (iii) percentage of fenestration on street facades; (iv) shape of windows

Table D.3 Level of variation of facade details

Street	Elements related to facade details				Final level of variation of facade details*	
	Type of details	Number of buildings with details (street as a whole)	Architectural style	Texture of revetments		
Street 1	2	1	1	2	6	The highest variation
Street 2	5	1	2	1	9	
Street 3	1	3	5	3	12	
Street 4	3	2	5	5	15	
Street 5	4	4	4	4	16	
Street 6	6	5	3	6	20	The lowest variation

* This is the sum of all numbers in each row: the lower this value, the higher facade detail variation. If more than one street has the same numeric classification, it means that these streets have the same level of variation.

and doors; (v) overall proportion of windows and doors; (vi) number of buildings with broken mass; (vii) percentage of street facade covered by buildings with broken mass; (viii) proportion of buildings; (xix) presence of horizontal or vertical partition on building facades; (x) presence of vertical elements on building facades; (xi) thickness of vertical elements on building facades; (xii) location of buildings on plots; and (xiii) presence of vegetation on building facades as decoration or in front gardens. Table D.4 shows the levels of variation of these aspects in each commercial street in the sample. In this table, the streets are ordered in a decreased order of variation: for example, regarding size of facades, the street categorized as number 1 (street 6) has the highest variation of this aspect, while the street indicated as number 6 (street 2) has the lowest variation of this aspect.

The following elements are taken into account to define the variation of visual character in the commercial streets of the sample: (i) architectural style of buildings; (ii) number of storeys of building; (iii) building roofline (hip roof, flat roof and so on); and (iv) building symmetry. Table D.5 shows the level of variation related to the visual character of each street facade. In this table, the streets are ordered in a decreased order of variation: for example, the street with the highest variation of building symmetry is classified as number 1 (street 4), while the street with the lowest variation of this aspect is classified as number 6 (street 2).

A colour palette is defined to analyse the colour variation of each commercial street facade in the sample; this palette is based on the colours of buildings and commercial signs. In this regard, the colours are grouped into three main categories: hue, colour-temperature, and colour-saturation. The following groups

Table D.4 Level of variation of facade articulation

Streets	Elements related to facade articulation												Final level of variation of facade articulation*	
	Size of facades	Fenestration	% of fenestration on street facade	Shape of windows and doors	Overall proportion of windows and doors	Number of buildings with broken mass	% of street covered by buildings with broken mass	Proportion of buildings	Presence of horizontal or vertical partition	Presence of vertical elements	Thickness of vertical elements	Location of buildings on plots	Presence of vegetation	
Street 3	5	5	6	1	1	1	1	2	2	2	1	2	2	The highest variation
Street 1	3	1	1	6	4	2	2	5	4	1	3	3	0	35
Street 6	1	2	4	2	6	3	3	3	5	1	2	3	0	35
Street 4	2	3	5	3	3	4	4	1	3	4	4	1	1	38
Street 2	6	4	3	4	2	3	1	3	5	3	4	3	0	41
Street 5	4	6	2	5	5	3	5	4	1	3	4	3	0	45

* This is the sum of all numbers in each row: the lower this value, the higher facade articulation variation. If more than one street has the same numeric classification, it means that these streets have the same level of variation.

Table D.5 Level of variation of visual character

Streets	Elements related to visual character				Final level of variation of the elements related to visual character*	
	Architectural style of building	Number of stories	Roof line	Building symmetry		
Street 4	5	1	2	1	9	The highest variation
Street 1	1	5	1	4	11	↑
Street 3	5	2	3	2	12	
Street 6	3	4	5	3	15	
Street 2	2	4	4	6	16	
Street 5	4	3	6	5	18	The lowest variation

* This is the sum of all numbers in each row: the lower this value, the higher variation of elements related to visual character. If more than one street has the same numeric classification, it means that these streets have the same level of variation.

of hues are identified by this general palette: (i) blue to purple; (ii) green to yellow green, (iii) yellow to orange, and (iv) brown to red (see Plate 4a, 4b, 4c). In terms of colour saturation, colours are divided into dark, medium and light; and in terms of colour temperature, colours are classified as cold and hot.

Two aspects are taken into account to define the level of colour variation in each street: (i) general colours of building facades and (ii) colours of body facades. Colours of commercial signs are not considered in this analysis because they were already analysed when the level of commercial signage variation was investigated. Table D.6 indicates the colour variation of each street with regard to the colour of buildings. In this table, for example, the street with the highest colour variation of building facade is categorized as number 1 (street 4), and the street with lowest colour variation of building facade is categorized as number 6 (street 2).

Having identified the level of building variation related to silhouette, facade details, facade articulation, visual character and colour, Table D.7 summarizes the final level of building variation in each street facade of the sample. In this table, the streets are ordered in a decreased order of variation: the street with the highest building variation refers to the street with lowest final sum (street 4), while the street with the lowest building variation refers to the street with the highest final sum (street 5).

As a result of the method presented in the above sections, the level of variation of commercial signs and buildings are summed up in order to calculate the final level of complexity of each street. These results are presented in Table D.8.

Table D.6 Level of colour variation

Streets	Elements related to colour variation		Final level of colour variation*	
	Colour of building facades	Colour of body facades		
Street 1	4	1	5	The highest variation
Street 3	2	3	5	
Street 4	1	4	5	
Street 5	5	2	7	
Street 6	3	5	8	
Street 2	6	6	12	The lowest variation

* This is the sum of all numbers in each row: the lower this value, the higher colour variation. If more than one street has the same numeric classification, it means that these streets have the same level of variation.

Table D.7 Final level of building variation

Streets	Physical characteristic of buildings					Final level of building variation*	
	Silhouette	Details	Articulation	Visual character	Colour		
Street 4	10	15	37	9	5	76	The highest variation
Street 1	22	6	35	11	5	79	
Street 3	23	12	29	12	5	81	
Street 6	25	20	35	15	8	103	
Street 2	28	9	41	16	12	106	
Street 5	29	16	45	18	7	115	The lowest variation

* This is the sum of all numbers in each row: the lower this value, the higher building variation. If more than one street has the same numeric classification, it means that these streets have the same level of variation.

Table D.8 Final level of complexity of the street facades in the sample

Streets	Commercial signs	Variation of physical characteristics of Building facades					Final Level of Complexity	
		Building facades						
		Silhouette	Details	Articulation	Visual character	Colour variation		
Street 4	38	10	15	37	9	5	114	The highest variation and complexity
Street 1	43	22	6	35	11	5	122	
Street 3	44	23	12	29	12	5	125	
Street 6*	39	25	20	35	15	8	142	
Street 2	48	28	9	41	16	12	154	
Street 5*	49	29	16	45	18	7	164	The lowest variation (not complexity)

* The term 'complexity' is not applied to streets 5 and 6 because these are tending to disorder. These streets are classified as just having higher or lower variation of commercial signs and buildings.

APPENDIX E

Questionnaires Answered On-site and Off-site

Questionnaires Type A – answered on-site

1. Do you like the appearance of this street?

- I really like
- I like
- I don't know
- I don't like
- I really don't like

1A. How important to your answer above is the: (each item should have one answer)

	Very important	Important	Undecided	A little important	Not important
Appearance of buildings	<input type="checkbox"/>				
Appearance of commercial signs	<input type="checkbox"/>				
Historic buildings and places	<input type="checkbox"/>				
Number of commercial signs	<input type="checkbox"/>				
Other:	<input type="checkbox"/>				

2. Rate this street along each of the following scales:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very beautiful	Beautiful	Neither beautiful nor ugly	Ugly	Very ugly
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very boring	Boring	Neither boring nor interesting	Interesting	Very interesting
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very ordered	Ordered	Neither ordered nor chaotic	Chaotic	Very chaotic
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very colourful	Colourful	Neither colourful nor colourless	Colourless	Very colourless
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very complex	Complex	Neither complex nor simple	Simple	Very simple

3. Please indicate the main positive and negative characteristics of the commercial signs:

Positive	Negative
----------	----------

4. Please indicate the main positive and negative characteristics of the buildings:

Positive	Negative
----------	----------

5. The number of commercial signs in this street is:

- very many
- many
- moderate
- few
- very few

6. Is the appearance of any building harmed by commercial signs? yes
 no

6A If yes, how many?

- very many
- many
- moderate
- few
- very few

7. Mark the alternative that best describes this street: (*each item should have one answer*)

8. The coverage of buildings by commercial signs is:

- very much
- a lot
- moderate
- small
- very small

	Very high	High	Moderate	Low	Very low
The variation of commercial signs is:	<input type="checkbox"/>				
The variation of buildings is:	<input type="checkbox"/>				

9. The commercial signs make the appearance of the historic buildings:

- very beautiful
- beautiful
- neither beautiful nor ugly
- ugly
- very ugly
- the street does not have historic buildings

10. Please identify the building(s) that you like the most in terms of the relationship between commercial signs and building facade: (*write the name of the sign displayed on the building that you chose; it will help the researcher identify the building later*).

11. Please identify the building(s) that you like the least in terms of the relationship between commercial signs and building facade: (write the name of the sign displayed on the building that you chose; it will help the researcher identify the building later).

Information about you

Gender: male female

Occupation: _____

Nationality: _____

Age: 18–29 years old 30–65 years old more than 65 years old

Thank you very much for your participation!

Questionnaire Type B – answered off-site

CITY CENTRE OF > *case study* < . To answer this part of the questionnaire you do not need to look at the poster.

1. Do you think that commercial signage controls are necessary in the city centre?

- yes
- no
- I don't know

2. Would you like to be consulted whilst commercial signage controls within the city centre are developed?

- yes
- no
- I don't know

3. How important might be the following in commercial signage controls to the city centre? (each item should have one answer)

	Very important	Important	Undecided	A little important	Not important
Appearance of buildings	<input type="checkbox"/>				
Appearance of commercial signs	<input type="checkbox"/>				
Historic buildings and places	<input type="checkbox"/>				
Number of commercial signs	<input type="checkbox"/>				
Other:	<input type="checkbox"/>				

4. How would you sum up the appearance of the city centre?

- very beautiful
- beautiful
- neither beautiful nor ugly
- ugly
- very ugly

4A. How important to your answer above is the: (each item should have an answer)

	Very important	Important	Undecided	A little important	Not important
Appearance of buildings	<input type="checkbox"/>				
Appearance of commercial signs	<input type="checkbox"/>				
Historic buildings and places	<input type="checkbox"/>				
Number of commercial signs	<input type="checkbox"/>				
Other:	<input type="checkbox"/>				

5. Regarding your personal experience, how important to you is the following city centre functions: (each item should have one answer)

	Very important	Important	Undecided	A little important	Not important
Leisure (visit; shop; linger in)	<input type="checkbox"/>				
Work	<input type="checkbox"/>				
Passing through	<input type="checkbox"/>				
Other:	<input type="checkbox"/>				

6. How would you sum up the commercial signage in the city centre?

- very ordered
- ordered
- neither ordered nor disordered
- disordered
- very disordered

7. You would describe the city centre as: (each item should have one answer)

	Strongly Agree	Agree	Undecided	Disagree	Strongly disagree
A historical centre	<input type="checkbox"/>				
A commercial centre	<input type="checkbox"/>				
A tourist centre	<input type="checkbox"/>				
A cosmopolitan centre	<input type="checkbox"/>				
Other:	<input type="checkbox"/>				

8. Do you think that commercial signage reinforces more the historic or the commercial appearance of the city centre?

- more the commercial appearance
- more the historic appearance
- the commercial and historic appearance equally

9. How important are the following in making the city centre an attractive place?

(each item should have one answer)

	Very important	Important	Undecided	A little important	Not important
Appearance of buildings	<input type="checkbox"/>				
Appearance of commercial signs	<input type="checkbox"/>				
Historic buildings and places	<input type="checkbox"/>				
Number of commercial signs	<input type="checkbox"/>				
Other:	<input type="checkbox"/>				

10. Do you think that the commercial signs in the city centre are positive or negative elements to the image of the city?

- positive
- negative
- I don't know

11. Does commercial signage help you to navigate through the city centre?

yes
 no

COMPARISON AMONG DIFFERENT COMMERCIAL STREETS. You do need to look the poster to answer this part of the questionnaire.

12. Looking the photos, rank the streets from 1 (I like the most) to 6 (I like the least): (please, put the numbers above the lines)

____ Street 1
 ____ Street 2
 ____ Street 3
 ____ Street 4
 ____ Street 5
 ____ Street 6

13. Do you like the appearance of the:

	I really like	I like	I don't know	I don't like	I really don't like
street 1?	<input type="checkbox"/>				
street 2?	<input type="checkbox"/>				
street 3?	<input type="checkbox"/>				
street 4?	<input type="checkbox"/>				
street 5?	<input type="checkbox"/>				
street 6?	<input type="checkbox"/>				

ANSWER THE FOLLOWING QUESTIONS WITH REFERENCE TO THE STREET YOU LIKE THE MOST IN TERMS OF APPEARANCE

14. The street that you like the most is:

street 1
 street 2
 street 3
 street 4
 street 5
 street 6

14A. How important to your answer above is the: (each item should have one answer)

	Very important	Important	Undecided	A little important	Not important
Appearance of buildings	<input type="checkbox"/>				
Appearance of commercial signs	<input type="checkbox"/>				
Historic buildings and places	<input type="checkbox"/>				
Number of commercial signs	<input type="checkbox"/>				
Other:	<input type="checkbox"/>				

15. Rate the street along each of the following scales:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very beautiful	Beautiful	Neither beautiful nor ugly	Ugly	Very ugly
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very boring	Boring	Neither boring nor interesting	Interesting	Very interesting
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very ordered	Ordered	Neither ordered nor chaotic	Chaotic	Very chaotic
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very colourful	Colourful	Neither colourful nor colourless	Colourless	Very colourless
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very complex	Complex	Neither complex nor simple	Simple	Very simple

16. Please indicate the main positive and negative characteristics of the commercial signs:

Positive	Negative
----------	----------

17. Please indicate the main positive and negative characteristics of the buildings:

Positive	Negative
----------	----------

18. The number of commercial signs in the street is:

- very many
- many
- moderate
- few
- very few

19. Is the appearance of any building harmed by commercial signs?

- yes
- no

19A. If yes, how many?

- very many
- many
- moderate
- few
- very few

20. Looking at the poster, mark the alternative that best describes the street that you most like: (each item should have one answer)

	Very high	High	Moderate	Low	Very low
The variation of commercial signs is:	<input type="checkbox"/>				
The variation of buildings is:	<input type="checkbox"/>				

21. The coverage of building facade by commercial signs is:

- very much
- a lot
- moderate
- small
- very small

22. The commercial signs make the appearance of the historic buildings (marked with a cross):

- very beautiful
- beautiful
- neither beautiful nor ugly
- ugly
- very ugly
- the street does not have historic buildings

23. Please identify the building(s) that you like the most in terms of the relationship between commercial signs and building facade: building(s) number _____**24. Please identify the building(s) that you like the least in terms of the relationship between commercial signs and building facade: building(s) number _____****ANSWER THE FOLLOWING QUESTIONS WITH REFERENCE TO THE STREET YOU LIKE THE LEAST IN TERMS OF APPEARANCE****25. The street that you like the least is:**

- street 1
- street 2
- street 3
- street 4
- street 5
- street 6

25A. How important to your answer above is the: (each item should have one answer)

	Very important	Important	Undecided	A little important	Not important
Appearance of buildings	<input type="checkbox"/>				
Appearance of commercial signs	<input type="checkbox"/>				
Historic buildings and places	<input type="checkbox"/>				
Number of commercial signs	<input type="checkbox"/>				
Other:	<input type="checkbox"/>				

26. Rate the street along each of the following scales:

<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very beautiful	Beautiful	Neither beautiful nor ugly	Ugly	Very ugly
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very boring	Boring	Neither boring nor interesting	Interesting	Very interesting
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very ordered	Ordered	Neither ordered nor chaotic	Chaotic	Very chaotic
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very colourful	Colourful	Neither colourful nor colourless	Colourless	Very colourless
<hr/>	<hr/>	<hr/>	<hr/>	<hr/>
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Very complex	Complex	Neither complex nor simple	Simple	Very simple

27. Please indicate the main positive and negative characteristics of the commercial signs:

Positive		Negative

28. Please indicate the main positive and negative characteristics of the buildings:

Positive	Negative
----------	----------

29. The number of commercial signs in the street is:

- very many
- many
- moderate
- few
- very few

30. Is the appearance of any building harmed by commercial signs?

- yes
- no

30A. If yes, how many?

- very many
- many
- moderate
- few
- very few

31. Looking the poster, mark the alternative that best describes the street that you most like: (each item should have one answer)

	Very high	High	Moderate	Low	Very low
The variation of commercial signs is:	<input type="checkbox"/>				
The variation of buildings is:	<input type="checkbox"/>				

32. The coverage of building facade by commercial signs is:

- very much
- a lot
- moderate
- small
- very small

33. The commercial signs make the appearance of the historic buildings (marked with a cross):

- very beautiful
- beautiful
- neither beautiful nor ugly
- ugly
- very ugly
- the street does not have historic buildings

34. Please identify the building(s) that you like the most in terms of the relationship between commercial signs and building facade: building(s) number _____

35. Please identify the building(s) that you like the least in terms of the relationship between commercial signs and building facade: building(s) number _____

Information about You

Gender: male female

Occupation: _____

Nationality: _____

Age: 18 – 29 years old 30 – 65 years old more than 65 years old

Thank you very much for your participation!

APPENDIX F

Interview applied to planning city council officers in Oxford, Gramado and Pelotas

1. Please tell me if any kinds of commercial signage control are applied within the city centre? If yes, what form do they take (such as laws, guidelines, and so on)?
2. What are the aims of these controls (such as to maintain and reinforce the character of the city centre, stimulate commercial activity, and so on)?
3. Who are the groups responsible for the development of commercial signage controls within the city centre?
4. Are these controls efficient to order commercial signage in the city centre? Why does it happen?
5. Who are the professionals consulted whilst developing commercial signage controls within the city centre? Do lay people participate in this process (such as local people, shop owners, and so on)? If yes, how do they participate (such as through discussion groups, workshops, questionnaires, and so on)?
6. How does the City Council enforce commercial signage controls in the city centre? Are there any penalties applied to shop owners if they do not comply? If yes, which are they?
7. Do the controls influence the appearance of the city centre? If yes, in which way does it happen?
8. Is a planning application to install a new commercial sign in the city centre necessary? If yes, who analyses this planning application and which physical aspects of the commercial sign are taken into account (such as size, shape, proportion, colours, fonts, and so on)?
9. Is the City Council involved in marketing the city centre to attract people (such as through posters, leaflets, tourist information, Internet sites, and so on)? If yes, what image of the city centre is being promoted do you think (such as historical, commercial, touristy, leisure, economical, and so on)?
10. Do commercial signs influence positively or negatively the image of the city centre? Why?
11. Has another commercial signage control to the city centre been developed by the City Council? If yes, why has it been done?

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