ISAIA 2018

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in the Age of Super Connectivity

CONFLUENCE OF ARCHITECTURE

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Pyeongchang Alpensia, Gangwon, Korea

社団法人 大韓建築學會

中國建築學会
The Architectural Society of China

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PREFACE

On behalf of the Organizing Committee, it is a privilege and an honor to invite you to attend the 12th International Symposium on Architectural Interchanges in Asia (ISAIA 2018), which will be held at the Alpensia Convention Center in Pyeongchang, Gangwon, Korea on October 23~26, 2018.

The Organizing Committee is planning the best possible programs including high quality academic sessions that will provide in depth knowledge and open new perspectives ranging in various fields of Architecture.

The International Symposium on Architectural Interchanges in Asia has earned a solid position since 1986 as an event with global influence and a powerful platform for international exchange, cooperation and collaboration in all aspects of Architecture.

The ISAIA 2018 consists of 6 keynote speeches, 8 categorized academic sessions and 2 special sessions. This year, we will have the young architects' design sessions which introduces emerging young architects with their design works and activities. The session will exhibit 46 amazing design works and 15 selected architects will present their design works during the session. Furthermore, we are pleased to announce that 434 papers from 12 countries will be presented in the oral and poster presentation and this is the highest ratings ever. We would like to thank you for your invaluable assistant and generous donation of time and efforts in preparation of the symposium.

During the symposium, many of the world's distinguished scholars and experts will attend the congress providing the opportunity to obtain the latest valuable information and experience in various fields of architecture.

Once again, we do appreciate your attending and hope to enjoy your stay in Pyeongchang, Ganwon, Korea.

Thank you.

Hyun-Soo Lee

President
Architectural Institute of Korea (AIK)

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S2-2 Floor Vibration Tests and Economic Evaluations of the Actual Building with iFLASH System
Min Jae Park, Beoul Yi Kim, Yun Qi Tian, Young K. Ju
Korea University, Korea

S2-3 Mechanical Behavior of Hysteresis Dampers Using Bent steel Plates for Base-isolated Structures
Yuki Hatanaka, Susumu Kuwahara, Fumihito Tamamura, Ryouta Tobari, Tomohiro Kinoshita
Osaka University, Japan

S2-4 Maximum Response Prediction of Base-isolated Structure with Steel Dampers Having Slip-type Restoring Force Characteristics
Jinwoo Kim, Susumu Kuwahara, Shogo Kamase, Ryota Tobari, Tomohiro Kinoshita
Osaka University, Japan

S2-5 Machine Learning Methods Used to Determine Deformation of Structural Members
Seok Jae Heo, Sang Hyun Lee
Dankook University, Korea

S2-6 Development of Design Equations for the Local buckling Strength on Octagonal Tubular Section Members
Tomoki Kobashi, Kikuo Ikarashi, Nobutaka Shimizu
Nippon Steel & Sumitomo Metal, Japan

S2-7 Optimal Structural Design Model for Flat Plate Slab
Sangguen Bae, Jewoo Choi, Dayo yun, Hyoseon Park
Yonsei University, Korea

S2-8 Estimation of Charpy Values for Steel Welded Connections at High Temperature and After Heating and Cooling Processes
Kai Ye, Fuminobu Ozaki
Nagoya University, Japan

S2-9 Minimum Yield Shear Force Coefficient of Hysteretic Dampers in Coupled Shear Wall Buildings
Bahador Bagheri, Seung Hoon Shin, Sang Hoon Oh
Pusan National University, Korea

S2-10 Collapse Behavior and Analysis of Stone Retaining Masonry's Damage in Kumamoto Castle During the 2016 Kumamoto Earthquake
Reo Tsunekawa, Toshikazu Ikemoto, Masakatsu Miyajima, Takao Hashimoto
Kanazawa University, Japan

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Chair Sangmin Ahn (Kure College, Japan)

H5 Architectural History and Theory

H5-1 The Integration of Natural Time and Architectural Space - Taking Tadao Ando's Works as an Example
Qian Wang, Jian Suo
Dalian University of Technology, China

H5-2 A Study on the Development way of Traditional Windows Joint Using 3D Printing
Jun-Seop Yoon, Seong-Lyong Ryoo
Korea University, Korea

H5-3 Conditions to Have Everlasting Contexts of the Academic Culture City (Case Study : Todai-ji, Nigatsu-do, Syuni-e
("The Mass of Water-drawing")) The Best Communicating Environment for Inclusive Education's Vision.(Special version 1)
Toshinobu Obata
The University of Tokyo & Honda Motor Co., Ltd., Japan

H5-4 Sun Yat-sen in Tiananmen Square and Modern Beijing
Koji Ichikawa
Meiji University, Japan

H5-5 Changes of Urban Fabric on Gwanak area in Seoul by Development of Seoul-Metro-Line-2 and Nambu-Beltway
Dongwook Kim, Bong Hee Jeon
Seoul National University, Korea

H5-6 A Study on The Process of Urban Planning Park Formation in Central Area of Kure
Yuji Sawada, Sangmin Ahn, Taichi Akimitsu
Kure College, Japan

H5-7 Study on The Spatial Pattern of Haikou Qilou - Taking Qilou Architecture in Zhongshan Road as an Example
Xinlei Zhuang, Chong Zhao, Ying Zhang
Fuzhou University, China

H5-8 Management of Knowledge as an Urban Preservation Tool in Japan Rural Areas
Jon Alvarez Fernandez
Waseda University, Japan

ACADEMIC SESSIONS_Oral Presentaion

H5-9 Narrative Urban Environments: A First Theoretical and Methodological Approach
Danilo Di Mascio
The University of Huddersfield, United Kingdom

H5-10 Traditional Public Buildings Found in Banjar System of Balinese Villages
So Young Kim, Seong-Lyong Ryoo
Korea University, Korea

16:00~18:00	Daegwallyeong Room 2(1F), Alpensia Convention Center

Chair Fang Zhang (Suzhou University of Science and Technology, China)

P9   Architectural Planning and Design

P9-1 Balance Between Collision and Integration, Transformation Strategies of Urban Abandoned Industrial Area with Translation of Industrial Memory
Fang Zhang, Xi Zhou
Suzhou University of Science and Technology, China

P9-2 Challenges of the Spontaneous Gentrification Process of the Old Town of Marrakesh, Case Study of the Neighborhood Units Surrounding the Dead End Streets
Imane Benelkadi, Suguru Mori, Rie Nomura
Hokkaido University, Japan

P9-3 A Study on Reconstructing Abandoned Urban Infrastructure Space based on Memory and Analogue
Yeseul Lee, Youngmin Koo
Inha University, Korea

P9-4 A Study on Recycling of Industrial Heritage in Yeongdeungpo Industrial Area - Focused on Corresponding to Contextual Changes around the Area of Dae Sun flour Mill -
Sik Min, Young Min Koo
Inha University, Korea

P9-5 A Study on Recreating Urban Context through Reorganizing the Border Conditions in Collision City
Nayeon Kim, Youngmin Koo
Inha University, Korea

P9-6 A Study on a Restoration of the Relations within a City through Applying Aldo Van Eyck's Concept of 'In-Between'
Misun Sung, Youngmin Koo
Inha University, Korea

P9-7 A Study on the Urban Regeneration over the Small Museum of Renovation
Hosung Won, Heekeun Kim, Youngho Yeo
Dongeui University, Korea

P9-8 A Study on the Necessity for Temporary Housing Development - A Case Study on Container Utilization in Busan, Ulsan, and Gyungnam Area
Hosung Won, Hyeonjeong Yang
Dongeui University, Korea

P9-9 Rethinking Urban Regeneration from a point of view in Transplantation Concept
Kwang Hyun Park, Young Min Koo
Inha University, Korea

P9-10 A Comparative Study on the Law of Construction Safety Sign Color Standards between 4 Countries
Ye Eun Jang, June-Seong Yi, Hyunbin Kang, Minyoung Hong
Ewha Womans University, Korea

16:00~18:00	Pyeongchang Hall 1(1F), Alpensia Convention Center

Chair Chungyeon Won (Korea University, Korea)

P10   Architectural Planning and Design

P10-1 Metamorphosis of Culturally Significant Restaurant Architecture: The Case of Kagurazaka and Nihombashi in Tokyo, Japan
Kanoko Tomita, Kaon Ko
Tokyo University of Science, Japan

Narrative Urban Environments: A First Theoretical and Methodological Approach

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Abstract

In this paper, a theoretical approach defining the concept of narrative characteristics of the urban environment and the development of a methodology and framework to identify and systematize them will be presented. Within this research the expression "narrative urban environment" means an urban environment that, like a novel in a book, tells a story through its tangible and intangible features such as: morphology, materials, spaces, colors, functions, lights, shadows, buildings decorations, historical traces, cultural meanings, signs and architectural vocabulary. The urban environment is the result of the work of multiple architects and stakeholders working in different social, economic and cultural influences and periods. Every single street can be the product of years or even centuries of continuous changes. Hence, every street is open to many interpretations and can tell a story that was not planned at the beginning. Therefore, in this regards, it is also possible to talk about multiple narrative layers. The research focuses on aspects that can be perceived through direct experience. In the first part of the paper, a brief review of other studies that present narrative approaches in architecture and urban design is included. Then, the main concepts underlying the expression narrative urban environment will be developed and described. The theoretical framework also takes inspiration from concepts of the theory of narrative in literature, called Narratology. Subsequently, the development of a conceptual framework will allow to identify and systematise the relevant narrative features of a street. In the last part of the paper, the theoretical framework will be applied to read the narrative characteristics of a case study, Grainger Street, a historical street in Newcastle upon Tyne, UK. This research proposes an alternative way to read and analyse the urban environment and can trigger essential reflections in architecture, urban design and education.

Keywords: narrative; urban environment; urban design; narrative architecture; theoretical approach

1. Introduction

This research proposes an alternative approach to read the urban environment focusing on its narrative qualities.

In recent years, narrative has received, and it is still receiving, a considerable interest in architecture and related design disciplines, such as urban design. This may be due to several reasons. Narrative has always played a central role throughout humankind history, and today it permeates all the main aspects of our contemporary society, where communication plays more and more of a central role. However, one of the primary motivations behind this research strictly links narrative to architecture and the urban environment. Nowadays, within these disciplines, it seems that the emphasis on aspects such as efficiency and functionality is, most of the time,

predominant. The human experience does not always appear as crucial as those characteristics, and this inevitably brings an impoverishment of aesthetic, spatial and cultural qualities of many contemporary buildings. It is well-known that a good design solution should always balance all those aspects and more. There is a real risk of falling into mistakes that are similar to the ones made by the superficial implementation of the theories developed during the modern movement. The failures produced by the ideas applied during that period are considerable, and those interventions include several typologies, such as social housing complexes. For example, the public housing project called Southgate Estate (Runcorn New Town, England) designed by James Stirling, one of the most renowned names in the architecture field was demolished after just fifteen years after its completion. The complex was substituted by a more traditional intervention that presents typical English houses and gardens.

Furthermore, sometimes it seems that architects and urban designers forget that, most of the time,

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people experience buildings and places from a human point of view from the ground and by walking and not from the top, like from a bird's eye point of view. An interesting shape from the top does not directly translate into an exciting direct experience. In addition to responding to specific functional requirements, places and architecture that are carefully designed taking into account human experience bear other qualities that make their experience, meaningful, exciting and pleasant.

This paper presents a theoretical approach that defines the concept of narrative characteristics of the urban environment and the development of a methodology to identify and systematize them.

2. Narrative in Architecture and Urban Design

In urban design and architecture, the word narrative has been interpreted and used in many different ways. Furthermore, the connections between architecture and literature have always produced inspiring works for both disciplines. Invisible Cities by Italo Calvino (1997) and the Danteum (the unbuilt project inspired by Dante Alighieri's Divine Comedy) designed by Giuseppe Terragni in 1938 (Schumacher 1985) represent remarkable examples of these cultural influences which also continue to inspire other works in both disciplines. Limiting the field of study to architecture and urban design, in the past, the topic has been explored by various architects such as Eisenman (Derrida et al 1997), Tschumi and Coates (Jamieson and Roberts-Hughes 2015). Recent publications such as (Psarra 2009; Coates 2011) examine the connections between narrative and architecture using different perspectives and tools.

Other writings deal with the relationship between storytelling and urban design, and mention buildings as objects that tell stories (Childs 2008). However, none of these recent publications was clearly inspired and influenced by concepts of the theory of narrative in the literature (Narratology), and also other scholars within this discipline recognize that the concept of "narrative space remains a relatively unexplored territory" (Ryan 2014).

3 Main objectives of the research

The primary purposes of this study are the followings:

- To define the concept of Narrative Urban Environments;
- To develop a theoretical approach to determine the narrative characteristics of the urban environment;
- To establish a methodology to identify and systematize them.

4. Narrative Urban Environments

The concept of Narrative Urban Environments

developed and presented in this piece of writing is based on and extend to the urban environment the concept of narrative architecture developed and described in (Di Mascio and Maver 2014). Furthermore, the development of the idea takes also inspiration from concepts of the theory of narrative in literature, called Narratology. "Narratology as a field of study is the ensemble of theories of narratives, narrative texts, images, spectacles, events – of cultural artefacts that tell a story. Such theory helps us understand, analyze, and evaluate narratives." (Bal 2017).

Behind the expression "Narrative Urban Environment" there is the idea to consider the urban environment as a narrative text (such as a novel in a book) which tells a story (or multiple stories) through its tangible and intangible features such as: morphology, constructive characteristics, building styles, functions, lights, shadows, historical traces, cultural meanings, street furniture, signs, architectural vocabulary, arrangement of streets, public spaces and buildings, colors, ornaments and so on. In this case, a narrative text is an object (or a set of objects) that communicate one or more narrative contents.

The story can be intentionally told, for example by a street or an area designed during the same historical period by the same practice/group of professionals (for example, the many Boulevards designed by Haussmann and his team in Paris or a financial district design by an International Firm), or be the result of the work of multiple architects and stakeholders working in different social, economic and cultural influences and periods, hence something unintentional.

There are several similarities and differences between a written novel and an urban environment. There must be someone that creates the narrative text (author) and someone else that read it (reader). Hence, both have authors and readers.

However, there are, naturally, also relevant differences. For example, a public space, such as a street, may have one or more authors, and these authors may have also lived in historical periods separated by hundreds of years.

5. Outlining a first theoretical framework to study a narrative urban environment

As a narrative text, an urban environment can be read and interpreted in several ways. The theoretical approach developed within this research focuses on those narrative aspects that can be read and understood during a direct experience of the place. As for the definition of narrative architecture (Di Mascio and Maver 2014), also here space is considered as one of the main characteristics of urban design and the starting point for the definition of a theoretical framework to study a narrative urban environment. Here space is defined as an

empty area (entirely or partially, circumscribed by artificial of natural elements) which has narrative qualities. Hence, it is possible to refer to it as narrative space.

The best way of understanding space is by experiencing it through movement, for example walking and looking around it (including moments where the observer/reader stands on a location and turns the head around to look at the elements that surround him/her).

The reader, with his/her body, eyes and mind, go through a sequence similar to one of the descriptions along with a narrative path in a written story. Hence, like a plot of a novel, spaces and architectural elements are discovered and experienced in sequence. In fact, a narration is characterized by the exposition of one or more events and its temporal sequence. The process of reading and interpreting a narrative text (both a written novel and an urban environment) always requires a specific amount of time.

In case of a written novel, a narrative sequence can be chronological or not. However, the reading process is usually linear because the text in every page starts from the top and finishes at the bottom of the same page (this is true for the majority of texts, but there are examples where a text is arranged in an artistic/irregular way to provoke specific effect) and continue on the next pages. On the contrary, in an urban environment, the reading of the narrative sequence can have different interpretations and is more open, even if there is a well-defined path such as in a linear street. Even if a public space, such as a street or a square, has a well-defined shape, the user can read the place starting from many different points and elements. He/she can focus on specific aspects and overlook others, even if sometimes there is a progression towards an endpoint. In general, it is possible to say that there is an open reading approach. Hence, the way to read the text is very subjective as its interpretation (and subjectivity is an aspect of every narrative text).

A novel is constituted by a sequence of events which are usually important facts that generally involve characters. The narrative sequence in an urban environment can be defined as a set of spaces (physically or visually related) and related architectural objects (from entire buildings to single architectural/urban elements) arranged in a spatial way (planned or unplanned). Hence, in this case, the narrative events are spaces and architectural objects that are particularly important. These events, through their tangible and intangible features and other details, provoke emotions, trigger reflections and communicate meanings. The description of the reading is similar to the story of a journey along the street but more reflective and analytical.

These narrative events are multilayered and multiscalar. This means that there are different levels of information and the size of these events may be very different. This also affects the reading that can be in turn multilayered and multiscalar. For example, the buildings of a street can (or in part) be all read as separated narrative texts, the street, then, can be related to an anthology of novels (all linked by a common theme, in the urban environment, the street). On the contrary, the buildings can be read as part of a wholly unique narrative text. It is evident that the layers and scale of those two readings may be very different and present different granularity.

Narrative events can be constituted by several narrative elements. A square, for example, can be surrounded by several buildings and can present green spaces, benches, statues which can contribute to the whole event. Furthermore, any of those narrative elements may be an essential event in itself. Narrative elements can pertain to very diverse categories (tangible and intangible) and contribute to the narration in several ways. The way they are presented or made, are relevant details like the sentences in a novel. The quality of writing affects the quality of the narration, and hence of the experience.

Like in a novel, every urban space and element is part of a bigger setting that is the city. Elements in the background can be also directly read and hence affect the reader/viewer's experience. For example, tall buildings, even if they can be seen only far from a distance, affect the reader/observer's experience in several ways.

In every narrative text, the content is extremely important. All those narrative aspects previously defined, communicate a content that here is considered of a twofold nature: one is the evoked emotions, another one is the meaning attached or embedded to each of those aspects. The following list summarizes the main concepts, aspects and elements of a narrative urban environment introduced in this section of the paper:

- Urban environment as narrative text;
- Narrative spaces;
- Movements;
- Narrative sequence;
- Narrative events;
- Narrative elements;
- Setting/Background;
- Content.

6. Case study: Grainger Street

Every single street can be the product of years or even centuries of continuous changes. Hence, every street is open to many interpretations and can tell a story that was not planned at the beginning. Therefore, in this regards, it is also possible to talk about multiple narrative layers.

Grainger Street is one of the main historical streets in Newcastle upon Tyne, UK. The street was created as part of a significant redevelopment project of the central area of the city during the XIX century, thanks to the vision and efforts of Richard Grainger (1797-1861), builder and developer, from which the road takes the name. The area that includes the street is called Grainger Town and has highly architectural and historical value. It was designed by the architect John Dobson, considered as the best architect in the North of England during his time (Faulkner and Greg 2001).

The street connects Central Station with Grey's Monument, which is an important landmark in addition to being considered as the city centre. Its length is of about 550mt. Most of the buildings have three or four storeys and twofold use: shops on ground floors and residential units on top floors. Beside these mixed-use buildings, there is a church (St. John The Baptist) and the historical market of the city, another essential element of Grainger's scheme. Along the street there are also a couple of modern buildings, one recently demolished and is being replaced by a new significant intervention.

6.1 Identifying and systematizing the narrative features of the street

In this paragraph, the theoretical approach developed and described in the previous section will be used to identify and systematize the main narrative features of Grainger Street (Figure 1). The definitions developed and summarized before are used as a theoretical framework.

Reading approach and narrative text: First, it is important to reflect on a reading approach that can be planned or unplanned and the definition of the boundaries of the narrative text. In this case, the following considerations address the reading approach. The street has multiple accesses, so the reading of the narrative text can start from several points. However, there are two points that are more important than the others, and one can be considered as the main access point for people that visit for the first time Newcastle upon Tyne. This main access point is Central Station, which can also be considered as a narrative event in itself. The other strong narrative event is Monument, located at the end of the street.

Narrative spaces: the street has a shape that is slightly irregular, it curves on the right-hand side and is uphill. The width of the street and sidewalks are generally constant. There are five main
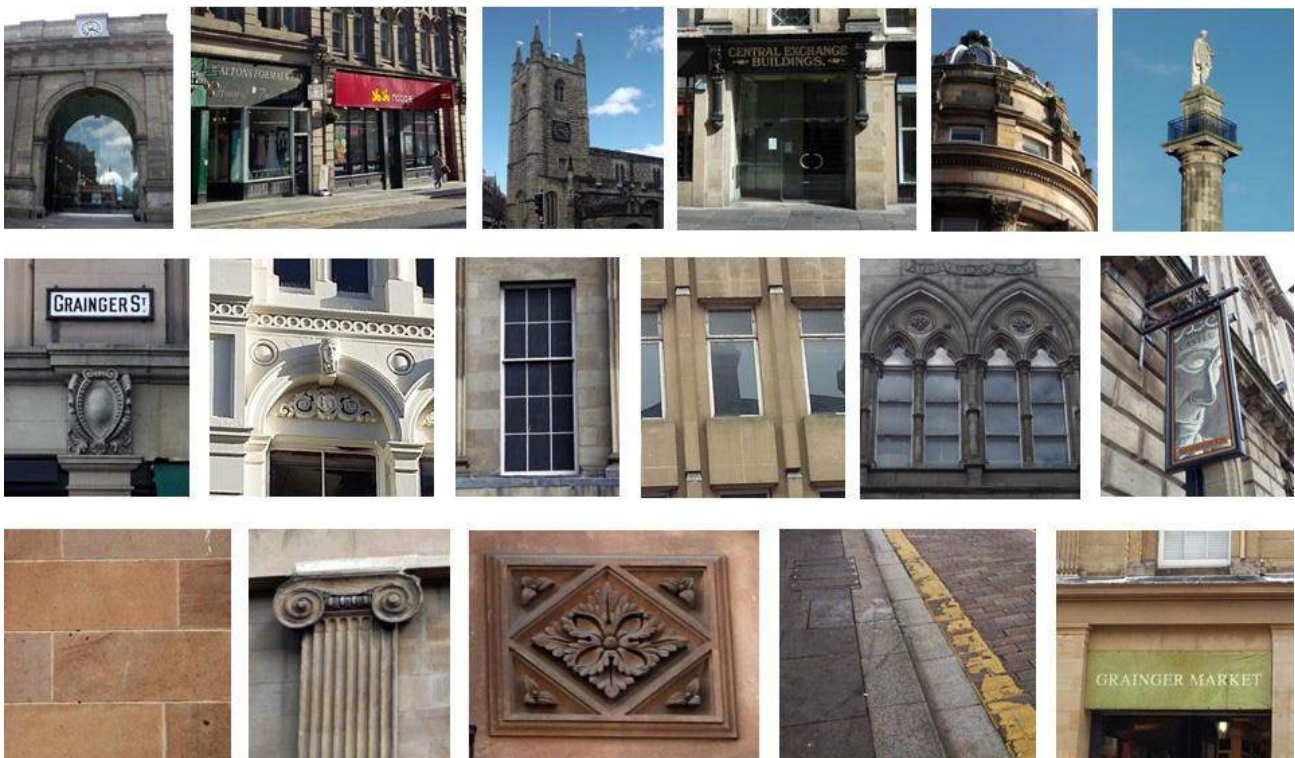

Fig.1. Examples of narrative events and elements along Grainger Street: shapes, decorations, materials, functions, signs, architectural vocabulary (doors, shop windows, columns, arches, cornices, mullioned windows, statues, etc.).

pedestrian areas: in front of Central Station; the space between the street located just in front of Central Station (Neville St) and the next parallel road (Westgate Rd); the public space next to the Church (St. John The Baptist); the historical Bigg Market; the last portion of Grainger Street that

merges into the public area around Grey's Monument.

Movements: There is a clear visual path from Central Station to Monument. However, there are different kind of spaces that may affect the dynamic of movement.

Narrative sequence: Grainger Street presents a succession of spaces and it is lined with Victorian, Neoclassical and Modern buildings. Victorian Architecture can be found close to Central Station, while Neoclassical architecture is close to Grey's Monument.

Narrative events: The main narrative events are Central Station, Grey's Monument, St. John The Baptist's Church, Grainger Market (even if the accesses from Grainger Street do not represent strong narrative elements), the main pedestrian areas. The public space that surrounds St. John The Baptist allows admiring a beautiful historical façade of a building. Also Bigg Market presents similar opportunities.

Narrative elements: The entire street is rich in narrative elements of different size and level of detail. They can be grouped into several sub-categories such as windows, doors, signs, plaques, decorations, styles, materials, etc.

Background: Monument is visible from a distance. Front the pedestrian space in front of Central Station, before crossing the street; it is possible to admire the spire of St. Mary's Cathedral on the right, and the top of the bell tower of the Cathedral Church of St. Nicholas on the left.

Content: Along Grainger Street, there are several historical buildings that catch people's eyes and provoke emotions for their architectural qualities (materials, dimensions, proportions, decorations). Central Station and Grey's Monument are two of the most important buildings. The uphill path, the sequence of historical buildings, the public spaces and the sight of Grey's Monument from a distance, the discovery of the beautifully decorated facades are all elements that strengthen the emotional engagement of Grainger Street. The shapes and ornaments of several historical buildings catch the reader/observer/explorer's eyes and lead them from the bottom towards the top of the structures.

The architectural style around Grey's monument is uniform because the whole area was part of Grainger's development. The other buildings were built during periods and styles and materials clearly convey these narratives. There are signs and plaques that communicate historical information and traces. All these narrative elements can trigger people's curiosity and desire to discover and learn more about the history of the street.

7. Conclusions

This piece of writing defined the concept of Narrative Urban Environments, presented a theoretical approach to determine the narrative features of an urban environment, and proposed a methodology and a framework to identify, describe and systematize them.

This approach represents an alternative way of reading the urban environment and its relevant characteristics and was inspired by several references, including concepts from narratology.

Only after identifying the narrative features of an urban environment, it is possible to comprehend how a narrative text is constructed. This will allow, on a second stage, to create better narrative texts, hence better architecture and urban environments.

This work represents the first step of a longer research path. The research is still in progress. This is a complex topic, multifaceted, and it will be further developed in future publications and through other research projects. Definitions, theoretical framework and methodology will be updated and enriched through further research projects and case studies. References will not be limited to architecture and narratology but will include concepts and methods from other disciplines including game design and cinema.

Further research and publications will also cover the visualization of narrative aspects of architecture and urban environments, that still represents an overlooked topic.

8. References

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