The conceptual model of spatial structure of tourism in cultural corridors in the core of Yogyakarta

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Abstract. The systemic harmony of the attraction in the cultural corridor area consisting of one or more fragments would work together forming a collective attraction. A destination in a corridor can be a visual linkage and datum linkage, both of which are parts of the cultural corridor. One approach to linkage theory is visual linkage and datum spatial linkage. The main aim of this study is to observe the existence of tourism object variation in regionalization and connectivity related to visual linkage and spatial datum. Visual linkage and spatial datum serve functional relation when measuring and analysing the spatial structure of tourism. The method used and developed in the study is of qualitative description with a conceptual model of the spatial structure of tourism using the connection of cultural tourism in the core of Yogyakarta city. There are two types of data used in this study, namely: a) primary data that is obtained through, field observation that includes observations of similar areas (precedent studies) and site locations to be used. b) Documentation, recording events using tools such as a camera that is used to capture images or videos, notebooks, and writing tools for taking notes or sketching and a smartphone. The result showed that the cultural corridor in the Malioboro area is a visual linkage of two or more fragments that are connected into a single unit visually able to unite the area at various scales. This results in connecting the area neutrally. The Malioboro area is a visual linkage, which is an area that is functionally united by connecting several areas and prioritizing one of them. The Malioboro area has several visual linkage elements such as line, corridor, side/edge, axis, and rhythm.

1. Introduction
The A city is one of the most complex human living spaces because its development is influenced by the activity of its inhabitants who have to adapt to the living conditions and current developments. City as a process in which results can be observed, which development is more prominent compared to the countryside areas and emphasizing on its economics. As a result, a city can be seen as an artificial means for the inhabitants to achieve or fulfil their economic needs.

According to Law [1], a city is the most prominent type of tourist destination in the world since 1980. As a world tourism phenomenon, a city is seen as a complex process intertwined with culture, lifestyle, and a collection of different demands towards vacations and traveling [2]. Cities are destinations with multiple motivations, unlike other resorts in general [1]. People go to a city for various purposes: business, recreation, visiting families and relatives, or other personal affairs. Oftentimes, they go to visit a city with more than one purpose in mind. People who go to a city for business would take their time to visit a museum or art gallery in the city they are visiting. Some international tourists visit and travel to the city as a hub to other destinations in the surrounding area.
Urban tourists use the city's facilities which are also used by city residents as a tourist attraction [1]. For example, commercial centres are not only being used by city residents as shopping facilities but also serve as the main attraction for tourists to visit as tourist attractions. In the context of global economic restructuring and de-industrialization in several cities in the world, tourism and tourism development play an important role in improving the city's economy which is starting to decline [3]. Tourism became an important motivation for the revitalization of cities at that time. The resurgence of cities around the world, the increasing living quality of the people, and the emergence of the middle-classes spur an increase in demand for tourism and recreation, both domestically and internationally. Large cities with various tourist attractions in forms of historical heritage or various new projects became the target of tourists from developed countries besides other tourist destinations in certain areas (beaches, mountains, historical sites, etc.).

The spatial aspect in urban areas in the context of the spatial structure contains non-physical and physical values (spatial layout and spatial pattern structure). The non-physical value represents philosophical values and equilibrium (harmony) between macrocosms and microcosms which are the foundations of cultures in certain places. Meanwhile, the physical value is the physical appearance of the spatial structure and the spatial pattern in that place and location. Non-physical and physical values in spatial structures and patterns have various and multi-sector dimensions. This research looks at how to relate tourism towards spatial values, mainly spatial tourism activities in urban areas. Spatial values and aspects are intended mostly for the development of tourism, culture, social interests, and social welfare.

Although not specifically planned, the two examples above explain how tourism is related to the spatial aspect of finding location points, capture points, vista with beautiful landscapes, and tourists' need for transit on their travel [4]. Traveling and tourism activities are carried out by humans for various purposes, such as trading and economic activities, seeking knowledge, or satisfying one's curiosity to a certain destination. Tourism is generally seen as a trip for leisure and pleasure, while in truth, tourism involves traveling for various purposes. The growth of urban tourism has resulted in the development of tourism urbanization, which is urbanization caused by the development of tourism, as explained by Lowenthal [5] as follows:

“...cities providing a great range of consumption opportunities, with the consumers being resort tourists, people who move into these centres to reside for a short time...in order to consume some of the great range of goods and services on offer”.

Lowenthal [5] also said that tourism urbanization is urbanization based on sales and consumption of pleasure. Special forms of urban tourism then emerge due to the development of tourism urbanization. There are not many tourism experts who had defined the definition of urban tourism. Lowenthal [5] defined urban tourism simply as a collection of tourism resource or activities located in cities which are offered towards visitors from other places. Referring to the definitions stated above, urban tourism can be defined more broadly as a general form of tourism that utilizes urban (non-agricultural) elements and all matters related to aspects of city life (service centres and economic activities) as tourist attractions.

Urban tourism doesn't always take place in urban or urban centre areas. Urban tourism can also thrive in coastal areas, for example, by developing its urban-related aspects as the tourist attractions. This is different from the tourist city. Tourist city is a city that is deliberately built or developed for tourism activities and the tourists themselves, relying on tourism as the main sector to drive its economy. Internal urban facilities that support tourism are very important to provide the best satisfaction and comfort for the tourists. Including the existence of urban space and its attributes, among others: 1) pedestrian paths, 2) street furniture, 3) signage, 4) public open spaces, and other complementary facilities.

Urban facilities and their attributes in urban tourism develop along with the development of urban tourism around the world. These facilities can give rise to the concept of urban tourism, which is currently developing around the world, there are at least six concepts, namely: 1) tourist-historic city,
2) cultural city, 3) resort city, 4) fantasy city, 5) creative city and 6) urban ecotourism. The concepts will be explained in the following Table 1:

| No | Tourism concept       | Description of the tourism concept                                                                                                                                 |
|----|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1  | Tourist-historic city | An urban tourism concept that uses history as a tourist attraction. Components from this tourist historic city consist of environments with historical architectures and urban morphologies, historical events, and accumulation of cultural artifacts; artistic success is the main material of this concept. |
| 2  | Cultural city         | The concept of the cultural city is far broader compared to historical cities or heritages. The components of the city serve as the main tourist attractions for cultural cities. The development of the concept of a cultural city largely consists of efforts to conserve cultural assets, tangible and intangible. |
| 3  | Fantasy city          | Based on a determined theme according to the city’s typology which is broadly developed.                                                                                 |
| 4  | Creative city         | A creative city is a form of the new generation of urban tourism. UNESCO has already designated creative cities around the world in 2001. Creative cities are designated based on specific criteria for each creative industry. |
| 5  | Urban ecotourism      | A concept of urban tourism that is mainly centered on the environment. The International Conference on Urban Ecotourism in 2004 produced a declaration on urban ecotourism. |

The concept of urban tourism in the form of historical cities has started to develop since the 16th century [6], while the concept of historical cities as a tourism resource has developed along with the development of urban tourism [6]. The concept of tourist historic city is an urban tourism concept that makes history as a tourist attraction. Components from this tourist historic city consist of environments with historical architectures and urban morphologies, historical events, and accumulation of cultural artifacts; artistic success is the main material of this concept [6]. This concept of urban tourism must pay attention to the conservation efforts of historical heritage in the city. The determination of types of tourist activities and targeted tourist market segments must follow the characteristics and traits of the historical heritage that is the main attraction of the city [6].

The concept of the cultural city is oftentimes seen as similar to historical city or heritage. The concept of the cultural city is far broader compared to historical cities or heritages. The city's components which become the main tourist attractions for cultural cities consist of: 1) museum and heritage tourism, 2) cultural districts (Chinatown, Arab Village), 3) ethnic community, 4) entertainment zone, 5) pilgrimage tourism, 6) literature trail. Similar to the tourist-historic city's concept, the development of a cultural city's concept is also largely of efforts to conserve cultural assets, tangible or intangible. In this cultural concept, the tourist has the opportunity to interact directly with the culture and the people of the city.

Fantasy city according to Hewison [7]. The concept of fantasy city emerged at the end of the 19th century in America. The most well-known concept is Hannigan Fantasy City, which identifies six characteristics of a fantasy city, focusing on: a) themocentricity, based on a determined theme, b) the city is aggressively branded, reflected in the marketing strategy and its products, c) day and night operation is a common feature, unlike shopping centres which largely operate in daylight, d) modularization of products, where the diversity of components is assembled to produce a wider variety of experiences, d) solipsiscity, where the city is economically, culturally and physically separated and isolated from the surrounding environment in a 'city of illusion', d) Post-modernity,
where the city is built with simulation technology, virtual reality, and sensation of performance. An interesting city that becomes the main inspiration is the Disney model, which is widely imitated. The Disney model brings the concept of moving pictures and amusement parks to a fantasy world using technology that creates a state of hyper-reality.

Creative city concept according to Timothy [8], beginning to be developed in 1990 in England and always related to cultural tourism. A creative city is a form of the new generation of urban tourism. UNESCO has already designated creative cities around the world in 2001 and 2012. Creative cities are designated based on specific criteria for each spectrum of creative industries.

The urban tourism concept is a concept that is mainly centered around the environment. The International Conference on Urban Ecotourism in 2004 produced a declaration on urban ecotourism. The content of the declaration stated that urban ecotourism is developed for the following purposes: a) restoring and conserving natural and cultural heritage, including natural landscapes and its biodiversity as well as indigenous cultures, b) maximizing local benefits and engaging urban communities as owners, investors, guests, and guides, c) providing educations to visitors and residents about the environment, heritage resources, d) and sustainability, e) reducing the ecological footprint, urban ecotourism has developed in America like the city of bicycles.

Malioboro Street and/or are the name of one of the three roads in Yogyakarta City that stretches from Tugu Yogyakarta to the Yogyakarta Post Office intersection. Overall, it consists of Margo Utomo Street, Malioboro Street, and Margo Mulyo Street. This street is the axis of Kraton Yogyakarta’s (Yogyakarta Palace) Imaginary Line. On December 20, 2013, at 10.30, the names of two segments of Malioboro Street were returned to their original names by Sri Sultan Hamengkubuwono X, Jalan Pangeran Mangkubumi became Jalan Margo Utomo, and Jalan Jenderal Achmad Yani became Jalan Margo Mulyo. There are several historical objects in this three-street area, including the Yogyakarta Monument, Tugu Station, Gedung Agung, Beringharjo Market, Fort Vredeburg, and the March 1 Sera Oemoem Monument.

Malioboro Street is very famous for its street vendors selling typical Yogyakarta handicrafts and lesehan stalls at night selling Yogyakarta gudeg food and is well known as a gathering place for artists who often express their abilities such as playing music, painting, silent art, pantomime, and others along this street. Ever since the birth of Malioboro Street, it has become the centre of government and the city's economy. Every part of Malioboro Street becomes the witness from an ordinary street to one of the most important points of Yogyakarta and Indonesia's history.

The urban tourism context in Yogyakarta is of tourism with linear paths and routes. The tourist attraction of urban tourism in Yogyakarta, among others, is the pedestrian path on Malioboro Street which is the result of the revitalization of the previous route. The attractions along this pedestrian path include the Jogja bike tour, new culinary spots, and unique tourist villages located in the city. The relationship between attractions emphasizes the relationship of movements that occur in several parts of the city, such as the relationship between one place and another in a city (Trancik, 1986). There are problems between the theory and the relevance of the urban context that is currently occurring on Malioboro Street, namely:

- Degradation of the honoured core philosophical values
- Degradation of urban tourism’s quality
- Degradation of visual image of the area, both formal and informal sectors
- Poor and unintegrated infrastructure quality
- Lack of public spaces to express creativity

The problems stated above will relate and be related to the Linkage theory approach, like visual linkage. As such, an area can functionally be seen between the relationships of its attractions as part of the visual linkage. Characteristics that will be strengthened and clarified with an emphasis on the sections that will be discussed in the analysis are:

- What kind of visual linkage is there in the Malioboro area as the city core?
• How are the elements of the visual environment formed, such as lines, corridors, sides, axes, and rhythms; and whether it is the conceptual model for the spatial structure of tourism in the cultural corridor at the core of Yogyakarta.

2. Research and methodology

The study on the conceptual model of the spatial structure of tourism in cultural corridors at the core of Yogyakarta uses qualitative descriptive research methods. Qualitative research is carried out because the researcher wants to explore unquantifiable phenomena that are descriptive such as the process of a work step, formulation, notions of various concepts, characteristics of goods and services, pictures, styles, cultural procedures, a physical model of an artifact and so on. Furthermore, Sugiono [9] also suggests qualitative research as a research method based on the philosophy of post-positivism, used to examine the conditions of natural objects, where the researcher is the key instrument, data collection technique is done by triangulation, inductive or qualitative data analysis, and the result of the qualitative research emphasizes more on meaning rather than generalizations. Qualitative descriptive research is intended to describe and portray existing phenomena, both natural and artificial, and pays more attention to the characteristics, quality, and linkages between activities.

There are 2 types of data used in this paper, namely: a) Primary data, which is obtained through: a) Field observations such as observations of similar areas (precedent studies) and upcoming site locations. b) Documentation, such as recording events using tools such as a camera that is used to capture images or videos, notebooks and writing instruments for taking notes or sketching and smartphones that are more flexible and versatile to use.

Secondary data, which is found through literature studies related to this writing, can be in the form of books, research journals, related final project reports, and accountable sites from the internet. After the data is collected and analysed, a precedent study will be conducted. The order is as follows:

• An overview of the Malioboro area which aims to understand more of the area, focusing on the linkage theory and urban fabrics.
• An overview of the functions and characteristics of the main buildings in the urban tourism in Malioboro area, which is conducted to seek an understanding of the history and background of the area and its constituent elements.
• Study precedent: Looking for similar area objects that are suitable to be able to do a comparison of the facilities and look for similarities between them to get their typology among other things so that it has a basis for what things must be observed.
• The theory emphasizes the relationship of movements that occur in several parts of the city, such as the relationship between one place and another in a city.

2.1. Research location

Overall, the research location consists of Margo Utomo Street, Malioboro Street, and Margo Mulyo Street. This street is the axis of Kraton Yogyakarta’s (Yogyakarta Palace) Imaginary Line. On December 20, 2013, the names of two segments of Malioboro Street were returned to their original names by Sri Sultan Hamengkubuwono X, Jalan Pangeran Mangkubumi became Jalan Margo Utomo, and Jalan Jenderal Achmad Yani became Jalan Margo Mulyo. There are several historical objects in this three-street area, including the Yogyakarta Monument, Tugu Station, Gedung Agung, Beringharjo Market, Fort Vredeburg, and the March 1 Serangan Oemoem Monument. The whole name of this street is a tourist route and is a corridor and pedestrian pathway.

3. Results and discussion

The research location is a tourist route as urban tourism, the Malioboro route has a theoretical linkage that emphasizes the relationship of movements that occur in several parts of the city, such as the relationship between places in a city [10]. There are three approaches in linkage theory, namely visual, structural, and collective, this analysis will carry out the analysis (Table 2):
Table 2. Analysis of approaches in linkage theory such as visual linkage and spatial datum.

| Linkage Theory Approach | Description of Linkage Theory |
|-------------------------|-------------------------------|
| Visual linkage approach | Visual linkage, an area is functionally united by connecting two regions and prioritizing one of them, there are several visual linkage elements in the form of corridors such as; line, side/edge, axis, and rhythm. |
| Spatial datum approach  | The organization of connecting lines which connect the parts of the area and the design of the "spatial datum" from the building lines to a space, forming a corridor. |

The linkage approach is in the form of imaginary lines that connect elements from one another, nodes with one another, or districts with one another. This line can take the form of a network of roads, pedestrian paths, open spaces that are in line, and so on. Linkage theory includes the organization of connecting lines which connect the parts of the area and the design of the "spatial datum" from the building lines towards a space. Spatial datum can be site line, the direction of movement, axis, or building edge. Spatial datum together forms a linkage system in a spatial environment. An urban linkage can be observed in different ways and different approaches, there are 3 approaches to urban linkage:

3.1. **Visual linkage**

Analysis of the Malioboro area has yielded primary (main) roads, namely Malioboro Street, and Margo Utomo Street which has its branch. Connections from the main road are interconnected so that they form a single unit or are visually connected. This characterization of the connecting road is due to the absence of a point that becomes the focus and more dominant in the area, which is the formation of a city that cannot be separated from the existence of network circulation. The existing network can be in the form of roads, pedestrian paths, and open spaces in linear form or forms that physically connect parts of the city/region. Malioboro Street in network theory is useful as a reference point in organizing the movement system.

Apart from analysing the characteristics of Malioboro Street in the area, there is also an analysis of the connecting route that visually leads to Malioboro Street. Starting from Malioboro Street which is included in the corridor element category. Artificial landscapes as well as the constituent and protective plants and structures along the primary road are used to define the relationship of each area within the Malioboro Street area. The road corridor connects every building in the area, both public and private buildings, mainly making tourist activities easier (see in Figure 1).

**Figure 1.** Artificial landscapes as well as aesthetic and protective plants and facades along the primary road are used to define the relationship of each area within the Malioboro Street area.
Visual linkage focuses on concentrating an area and has a special function and meaning in the city because it is dominant and stands out from its surroundings, such as on Margo Mulyo street with its Golog-Gilig Monument. There are pedestrian paths and tourism facilities such as hotels, restaurants, and travel agents on Jalan P Mangkubumi (now Jalan Margo Utomo), which is the name of the road that stretches from de Witte Paal Monument to the railroad connecting to Malioboro Street. From de Witte Paal Monument to the south, all the way to the North Square are Margo Utomo-Malioboro-Margo Mulyo; they are the point of attraction as the philosophy of the Yogyakarta Palace. Conscientious thinking on unity and oneness are the meanings of the golog-gilig. Relationship with God is usually called habluminallah, meanwhile, the relationship with the people, as represented by the downward-spiral part, is commonly called habluminannas. A king must always maintain a close relationship with God the Almighty. The road corridor that stretches from the direction of Witte Paal Monument to the south is the philosophical stage that all humans must live through in the world.

One of the main characteristics of the visual environment found in the Malioboro area is that it has five visual linkage elements, which are elements that have specific characteristics and atmospheres that result in visual relationships, consisting of:

- Area line: directly connects two places with a row of masses (buildings or trees).
- Regional corridor: formed by two rows of masses (buildings or trees) that form a space.
- Regional sides: connecting two regions with one mass. Similar to the line element but the sides are indirect.
- Regional axis: similar to corridor element, but when connecting two regions, it only emphasizes one of them.
- Region’s rhyme: connecting two places with variations of the masses and spaces along the main road.

3.2. Spatial datum approach
The datum approach on the Malioboro area is the dynamics of the urban regions that are seen as the region's generator. This spatial datum analysis is a good tool to pay attention to and to emphasize the relationships and movements of a spatial layout in an urban area (urban fabric). The linkage approach is a tool to control the composition of the Malioboro area, such as the pedestrian path and its street furniture (Table 3).

| Cognitive Ground Figure | Corridor’s Function |
|-------------------------|---------------------|
| The corridor functions as the main entrance of the main route for tourists in the Malioboro area, there is a Tugu Station with an access corridor between cities and provinces. Another corridor functions as an entry point, and this corridor as a high commercial diversity. In this corridor area, there are BCB with indisch style (Indo-Dutch) architectural style which is a combination of western culture and local (eastern) culture with its figures that tend to be symmetrical. This corridor figure pattern tends to be massive (solid). |
Table 3. Cont.

| Area                     | Description                                                                                                                                                                                                 |
|--------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Social Corridor          | The corridor functions as a social corridor, in this area there is a heritage in the form of cultural heritage objects such as the Kepatihan building with its Javanese traditional architecture and several other cultural heritage objects in the corridor with *indisch* architectural style. The corridor also functions as a social mall corridor and as an interactive, recreational and communicative platform. A prominent characteristic of this corridor is its strong commercial area. There are open spaces that function as pedestrian paths. |
| Culture Corridor         | The corridor functions as a culture corridor. There is a BCB - Chinatown shops with Chinese architectural styles in Kampung Ketandan and Ngupasan which have a strong Chinese feel to them. Chinese Architecture's Characteristics: a type of gable roof with an upward curved tip known as the Ngang Shan model. Red and golden yellow colours are most commonly used. Kampung Ketandan and Pajeksan with their strong Chinese culture are inhabited by ethnic Chinese; Chinese architecture in Pajeksan is not as strong. This corridor has a medium to high density. |
| Preservation Corridor    | Functioning as a preservation corridor, this area has become a landmark of Malioboro, preservation acts in this area consist of preservation of a place exactly as it was in its original state without any changes, including efforts to prevent destruction or removal. Gedung Agung and Fort Vredeburg both have a high level of authenticity, still the same as their original shapes. Fort Vredeburg which directly faces Gedung Agung is a building that was built in 1760. The grandeur atmosphere that is still felt in Fort Vredeburg today was first suggested by the Dutch through Governor W. H. Van Ossenberchon on the grounds of maintaining the stability and security of Sultan Hamengkubuwono I’s government. This fort was designed by Frans Haak. |
There are two areas in the corridor, namely the Beringharjo market area and the conservation area, and government buildings in the form of Vredeburg Fort and the State Palace. The Beringharjo market area does not have a building setfront, so the building's pedestrian is used as a selling area for street vendors. The conservation area, however, has a clear setfront and is free from any street vendor. This pedestrian is decorated with street furniture such as trash bins and benches that circle the plant’s pots (Green Bench). Vegetation in the form of tamarind type trees exists along the Beringharjo Market area on the east side. There is no vegetation on the opposite side. Meanwhile, the vegetation in the conservation area is in the form of banyan trees along the Vredeburg Fort and palm trees as high as 6-8 meters along the pedestrian of the State Palace (Figure 2 and Figure 3).

In general, from the analysis above (Figure 4), a cultural corridor is formed from theories that see the city as a product. Roger Trancik as a figure in urban planning suggests that all three approaches of the following group theory serve as the basis of urban planning studies, both in historical and modern ways. The three theoretical approaches have potential as a city planning strategy that emphasizes urban products in an integrated manner. Some of the weaknesses of Linkage analysis arise from another perspective, namely the lack of attention in defining urban space (urban fabric) spatially and contextually [11].
As such, in the context of the cultural corridor in this Malioboro area, the linkage is in the form of imaginary lines that connect elements from one another, nodes with one another, or districts with one another. This line can take the form of a network of roads, pedestrian paths, open spaces that are in line, and so on. Linkage theory includes the organization of connecting lines which connect the parts of the area and the design of the "spatial datum" from the building lines towards a space. Spatial datum can be site line, the direction of movement, axis, or building edge. Such components together form a linkage system in a spatial environment. Next, according to Krier [12], urban space is a centre of formal activities in a city, formed by building facades (as an enclosure) and city floor.

4. Conclusion

- The cultural corridor that is formed in the Malioboro area is a visual linkage of two or more fragments that are connected into a single unit that is visually able to unite the area at various scales which results in connecting the area neutrally.
- The theory of linkage spatial datum in the context of the corridor pays attention to the arrangement of the relationships between parts of an area and the circulation which is an emphasis on the movement relationship which is a very important contribution. Linkage pays attention to and emphasizes the relationships and movements (dynamics) of an urban spatial layout (urban fabric).
- Malioboro Street area is a road that starts as a space that can become a place if it is covered by the buildings along the road, and or the existence of the landscape that surrounds the road, a place’s presence will become stronger if it has certain characteristics and atmospheres that are meaningful to its environment.
- Malioboro area is a visual linkage, which is an area that is functionally united by connecting several areas and prioritizing one of them. Malioboro area has several visual linkage elements such as; line, corridor, side/edge, axis, and rhythm.

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