



The Appearance of Colour and Light Elements at  
*Knutpunkten*, a Transportation Hub in Helsingborg:  
observations of the visual impact of some design and  
architectural elements

A Master's Thesis for the Degree" Master of Arts (Two Years)

In Visual Culture

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## **Research abstract**

This thesis is dedicated to analyse the contribution of *Knutpunkten* station building which is located in Helsingborg southern Sweden with regard to visual impact on the society and environment through its visual elements of design, merely the colour and light elements. Different philosophical conceptions of colour and light from different theoretician notions is used and applied to the main empirical material. Moreover, since this thesis is dealing with visual matter, image material is used in order to support the discussions in terms of illustrating the discussion with visual form.

The discussion is analysing the meaning of colour and light and the significant appearance of those elements on and in this building in its spatial context and also deals with the effect of those elements from a psychological and a physiological point of view.

The finds and result of the discussion above is based on the appearance of this building in its present state. Those elements appear to have a strong relationship with the observers. In general, this thesis is trying to be an application of the study of Visual Culture through analysing, discussing, making critical comments and providing solutions to basic, socially related problems that concern the daily, visually experienced world of *Knutpunkten*.

## **Acknowledgment**

First of all I would like to give a gratitude to the government of Sweden for giving me this golden opportunity to study this course without any costing. I can't measure this opportunity in terms of money. I would like to give thanks for the people who have full of goodness and professional manner been supporting and teaching me, so here is my thanks to my teachers as well as to the libertarians who have helped me to find books and materials for this study, and also for the whole stuff members. I can't forget all students who showed me familiar response during my staying with them. I would like to say thank you very much for all of my class mates for our discussion, brain storming and sharing of ideas. These were really helpful for my study so all of you my mates and your contribution were a fundamental for me and they will remain so.

Thank you.

## **Introduction**

### *1.1 Introductory outline of the problem*

Helsingborg is one of the oldest cities in Sweden. It is located on the south western coast part of the country. The city is located at strategically vital point for the Baltic Sea and is well known for its regional industrial, trade, business and the ferry interconnection transportation activity with the closest neighbor Denmark; linking between Helsingborg and Helsingör. Inside Helsingborg, there are many historical monuments such as sculptures and historical buildings including the Scandinavian architectural mark Kärnan castle, one of the medieval castles which played an important role in the historical relationship between Denmark and Sweden during the seventeenth century.

In Helsingborg there are gigantic industrial production activities which can give or be a brand in order to symbolize the city of Helsingborg in Sweden as well as worldwide. For instance, Helsingborg is much known for the rubber boots factory which was founded by Henry Dunker and also Helsingborg is the place of the headquarter of the IKEA company, one of the world's largest furniture and home products retailing companies; those can be a brand for the region Helsingborg, and act as for national brand of production of Sweden design cultural brand. As Julier, professor of design describes Wolff Olins's argument how the city of Leeds becomes branded in the late 1980<sup>s</sup>; "Place-branding is the process of applying the branding process as applied to commercial products to geographical locations and is burgeoning activity within advertising and marketing"<sup>1</sup>. Therefore, the city of Helsingborg can have an opportunity to be branded as such since the city is known for its industrial production among the cities of Sweden cities with regard to Sweden's industrial production culture. Currently the city of Helsingborg is actively working on the reformation of the city plan in terms of improvising the future city scheme in order to provide suitable, visually pleasurable and functionally successful places. The new reforming the city project, H+ project is aiming for the future scheme of Helsingborg basically in order to interconnect the southern and the northern part of the city figure. The project plan is located and focusing around the

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<sup>1</sup> Julier Guy, 'evaluating place' in *THE CULTURE OF DESIGN*, SAGE Publication Ltd, London, 2008, P.125.

southern and central part of the city with regard to interconnecting the two parts of the city, the southern and the northern part.

Such places, even in urbanism history, they have been used as the main gates for the city arcades. As Buck-Morss said of the early nineteenth century during the urban renewal project of Paris “Railways penetrated to the heart of Paris, and railroad stations took over the function of the city gaze”<sup>2</sup>. Knutpunkten’s architectural structure form and its functionality of the main gate for Helsingborg is similar to the arguments of Walter Benjamin’s about the arcade of Paris. His way of looking at the arcade of Paris is criticizing the switch of the buildings to commodity. For instance the public spaces have been converted to gambling and fetish commodity centers. According to Buck-Morss “The covered shopping arcades of the nineteenth century were Benjamin’s central image because they were the precise material replica of the internal consciousness or rather, the unconscious of the dreaming collective”<sup>3</sup>.

I visited Knutpunkten for the first time on the summer 2009; the first impression I had was that the building is a very modern architectural structure and aesthetically more beautiful than other transportation buildings I have seen In Sweden. This building, despite the fact that it was built in the late 1990s, it looks like a modern period architecture in some part of the synoptic of the building. For instance, around the main gate the structure of the building is an arcade form. This form has been accounted as a modern architecture style during the nineteenth as Benjamin describes “The arcades were the first international style of modern architecture, hence part of the lived experience of the worldwide, metropolitan generation”<sup>4</sup>.

In the following essay, I will raise and discuss the relationship of elements of design and Knutpunkten. In order to do so, I will try to analyze and find visual problems concerning the elements of design at Knutpunkten and in what way it has a relation with society as well environments with regard to visual impact. Since Knutpunkten architecture form is a kind of “gigantic manmade object”, it is easily visible and address its meaning and psychological affect on the society sense and environmental

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<sup>2</sup>, Buck-Morss, Susan, ‘Urbanism’, *The Dialectics of Seeing: Walter Benjamin and the Arcades Project*, cambridge, mass: MIT Press 1989, P.89.

<sup>3</sup>, Buck-Morss, P.39.

<sup>4</sup>, Buck-Morss, P.39.

impact that is much greater when we compare it with the other non public buildings. According to Day's argument "most of the time we don't notice our surrounding and then they can work upon us without any conscious resistance on our part. As these surroundings are mostly built environment, architecture can significantly affect us"<sup>5</sup>. In addition, as the technical and management consultant of architecture as Barry Blesser and Linda-Ruthsalter describes,

"unlike other art forms, architecture provides spaces for daily activity of life; when more than skimpily utilities. By choosing and combining materials, colors, and shapes, architecture embeds their respective artistic messages in structure that we see, hear and feel"<sup>6</sup>.

So based on those two premises, what is Knutpunkten telling us? The problems which I found to discuss regarding visual and psychological impact are included in the research question part.

### *1.2 Research focus*

The focus of this thesis is mainly on architecture design objects and their relationship with the elements of designs, especially between colour and light elements. Therefore, the concern of this thesis is focus on the building of my reference, Knutpunkten, and to analyze how it contributes it's in terms of visual impact, either negatively or positively and how it address on the society as well as environment. Most of the discussion will be focus on colour element.

### *1.3 Research problem/ interests*

The interest of this research is intended to find out the positive or negative impact of architecture. Based on this general interest, this thesis is concerned with finding the contribution of the Knutpunkten in terms of visual impact on the society as well as environment. Furthermore, buildings have a serious relationship with human beings since biologically humans need shelter for living as Rush says, "no one, presumably, will deny the common sense idea that architecture can or should lie at the heart of

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<sup>5</sup> Day, Christopher, 'Architecture: does it matter? In *Places of the Soul*, Architecture and Environmental Design as a Healing Art, London: Aquarian press 1993, P.4.

<sup>6</sup> Blesser, Barry and Salter, Linda-ruth, 'Introduction to Aural Architecture' in *Spaces Speak, are you listening?* Cambridge, Mass.: MIT Press , 2007, P.1.



social community and self-understanding that is part and parcel of this idea of dwelling”<sup>7</sup>. However this building is kind of what Heidegger says “not every building is a dwelling”<sup>8</sup>, functionally it is not designed for. However, this bilateral relationship have different problems or effects between design objects and the users due to many reasons; the main ones including the technical and aesthetical problems. The interest of this study is actually not to address the technical issues; instead it’s devoted to engaging with aesthetical perspectives. Therefore, aesthetically how are the elements of design mainly colour and light applied on Knutpunkten? And what is its impact on the society and also on the environment? Those problems are the main research interest of this thesis.

#### *1.4 Research questions*

This thesis is basically seeking to answer two main questions.

\*What is the visual impact of Knutpunkten on the society as well as the environment?

\*How is the role of elements of design such as color and light represented and making their contribution at Knutpunkten?

However, those two questions as main issues or interest investigation of this thesis, in the part of visual impact it also has connection with an aspect of psychological impact. Since the subject of this study is deeper and fascinating, I should raise some other relevant questions in order to make them wider and facilitate a space for similar questions to discuss with in multiple directions. In addition, the following relevant questions, I believe, will be help full to answer those two main questions of this thesis.

-What is the role of Knutpunkten in terms of its visual capacity?

-How does color and light apply on Knutpunkten?

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<sup>7</sup> Rush, Fred, ‘Bodies and Architectural Space’, in *On Architecture*, New York: Routledge 2009, p. 2.

<sup>8</sup> Leach, Neil, ‘Building, Dwelling, Thinking’ in *Rethinking Architecture*, London: Routledge 1997, p. 100.

- Is there any visible problem on Knutpunkten from elements of design perspective?
- Dose Knutpunkten contribute in its visual role since it is the first impression?
- How can Knutpunkten address the user's senses?
- What is its psychological implication?

To maintain the logical sequence of discussions, I am trying to raise only those relevant questions which are familiar with the two main questions of this thesis.

### *1.5 Research objective*

The two principal goals of this study are:-

First, I am intending to find out the relationship between architectural design, human and environmental from the visual experiencing point of view. The objective of this thesis is try to find out what is the contribution of this building in order to provide visual spatial for the society as well as environment and what is its effect? Second, another objective of this research is to search out how and what is the role of elements mainly focused on color and light on Knutpunkten building. Those main research objectives of this thesis will focus mainly on Knutpunkten.

### *1.6 Academic relevance*

The main purpose of this thesis research is intended to be applicable for the urban or urban redesigning. As I mentioned, Helsingborg is on the process of redesigning. The city urban plan and the project of Knutpunkten is also a part of the urban renewal project H+. Therefore, since the research is directly connected with this project it can be applicable for the future plan. Moreover, this research is important in order to accomplish what is desired by the city and habitants. In addition to this, this research is useful with regards to provide visual and theoretical concept to the future Knutpunkten project; which will also be helpful in order to change the scheme of the building for the better meeting place, suitable transportation space as well as visually attractive environment for the city of Helsingborg. Besides, construction is a sign of the development and economical progression in developing countries at this time. So this study will contribute to criticizing the construction culture from an aesthetic theoretical point of view.

### *1.7 Current state of research*

There are numerous research results at this time on different kinds of fields or subjects concerned with the Knutpunkten project from different perspectives. However, I couldn't find any current or previous research results regarding on the contribution of Knutpunkten in terms of visual impact on the society as well as environment from the point of view of elements of design mainly colour and light.

### *1.8 Theoretical framework*

This research essay is constructed by various theoretical approaches in order to support the discussions with theories. Nonetheless, the colour theory is an important and major theory in this research which covers the large amount of my discussions part about the role of elements of design on Knutpunkten. For instance, I will try to refer a legendary colour theoretician such as Johann Wolfgang Von Goethe, his arguments about colour and light is the central concept of my colour and light analysis body.

### *1.9 Research method and Structure*

As to methods of undertaking the research I will be using a theory and pictures analysis, discussion as well as comparisons between Knutpunkten and with other experiences of design culture. Moreover, I will try to support my discussions with different philosophical approaches and different literatures as theory references in order to combine and gives some philosophical background about what philosophers discussed on this issue; particularly intending to use theories which mainly involve and discuss architectural Design, Colour and Light. Over and above this, since picture analysis is part of this thesis research method, I am using pictures from Knutpunkten itself as material for the picture analysis. I am also making a brief comparison with Shepherd's Bush station in London.

In addition, the discussion and analysis about Knutpunkten is divided in to three parts since structurally the building itself is divided in three parts. So after I give a description about the general view of the building, I will go to discuss the particular views such as the main gate, the bus terminal and the train station part. Even if the ferry station is not included in this thesis as a main division part but since it is located and it is the part of the main gate of this building I will include it with main gate part. Generally the method of this thesis will combine and address those three divisions of

the building as the main part of my discussion and accompany with the theory and picture analysis.

### *1.10 Background and Research Interest*

Since September 2009 while the visual culture students were working on the Knutpunkten project seminar, I as one of the students in this project, participated and worked in the group of “General Visual Impact of Knutpunkten”. We have raised many points and ideas during the seminar in order to relate the project with our theoretical background in the visual culture study. I have changed the study from the previous seminar project content and rather I am focusing on elements of design, mainly on colour and light.

The topic I have chosen helps to incorporate visual appearances and aesthetics in other fields such as architecture, city planning or urban settlements. This is another reason that made me more interested in studying this subject further. As I mentioned above, Knutpunkten is mediating southern and northern Helsingborg at this time as well as in the resettlement city plan. However, when it was built twenty years ago the main aim was to set up a conjunction place for the city, in order to connect the bus, train and ferry transportation hub in one central place. Perhaps from this functional point of view, Knutpunkten might be successful when we compare to the previous infrastructure of transportation system for the city as well as the region of the Baltic Sea. Nonetheless, the motive of this study is not to seek of Knutpunkten from its natural purpose, but instead to be inspired by its spatial contribution for the last twenty years and further more to discuss its possible contribution to the future resettlement of Helsingborg city plan with regards to the visual.

### *1.11 Research material*

Knutpunkten itself is the main material for this thesis since it is the central subject of my discussion and analysis. The fact that the study involves mainly this building and pictures references for the analysis and discussion makes it the main material for this thesis. Moreover, I will refer to different texts which are dealing with relationship between architectural design and users as well as architecture and elements of design. The other material is pictures for discussion, analysis and comparisons from the comparative material from Shepherd’s Bush station which will be the part of the resource material for this thesis.

## 1.12 Outline

The outline of this thesis comprises six main chapters. The chronological structure of this thesis is constructed in the following form:-

Chapter 1, this chapter is the introduction part of the thesis. It introduces the general over view of the thesis architecture, and it also states items such as the introduction of the problems of the research, method and objective of the research, case study, research focus and questions, materials, and as well as the outline of the thesis. It gives the view of the thesis body and development, describes the chapter's title and introduces the synopsis plan of this thesis.

Even if many readers of this essay are probably familiar with Knutpunkten, it is important to give information about Knutpunkten for who do not have any idea about it. For this reason I will give a rough general view of Knutpunkten in the chapter two. This chapter is concerned with the general visualization of the building such as its geographical and physical location. In addition, this chapter also covers a description of the structures of the building which help us in order to address the subdivision the building such as the bus terminal, the train station and the main gate area including the ferry transportation part.

And later on in chapter three I will discuss the elements of design merely about the origin of colour and light, and the usage of those elements. Furthermore, this chapter will introduce the general characteristics of colour and its relation with design. In this chapter, even though I will cover a little about form and light, the colour part discussion will be dominating. This is because the element of light itself is highly connected with the spectrum which means scientifically that the light produces colour when sunlight pass through a prism. In addition, the combination of both light and colour also can create forms. This is also referred by the German classic theoretician Goethe's colour theory, he said, "we now assert, extraordinary as it may in some degree appear, that the eye sees no form, inasmuch as light, shade, and colour together constitute that which to our vision distinguishes object from object, and the parts of an object from each other"<sup>9</sup>. So, this chapter also will cover the

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<sup>9</sup> Eastlake, Charles Lock , Introduction by Dean B. Judd, In Johann Wolfgang von Goethe, *Theory of Colours*, Massachusetts Institutes of Technology 1970, p. 52.

contribution of colour and form for our cognition with regards to distinguish the objects or images.

Moreover, according to Meerwein/Rodeck/Mahnke naturally colour and light has a relationship with forms “light and colour is inseparable partner in the process of perception. Together with the perception of form, they become part of the overall picture<sup>10</sup>”. So for these reasons the colour part of the discussion is covered in a wide space compare to space covered by the discussion around light. In this chapter, I will discuss about the epistemology of colour from different theoreticians point of view. For instance philosophers such as Immanuel Kant, Jonathan Westphal, Johann Wolfgang Von Goethe, Georg Wilhelm Friedrich Hegel, Ludwig Wittgenstein, Ronald Barthes and Jacques Derrida’s philosophical approaches on colour will be addressed.

Chapter four is dedicated to analyzing the contribution of elements of design at Knutpunkten. In this chapter, I will give a brief a description of the appearances of colour and light on the three parts of the Knutpunkten both the outer and inner part of the train station, the bus terminal and the main gate area which includes the ferry part respectively. This chapter also includes a discussion about the Conflict and Relationship of elements of design at Knutpunkten which applied on it. This discussion will lead us to aesthetic appearances of the building by means of colour and light in terms of provide visual sensuous and later on the psychological influence part based on the upper discussions will take from the perspective of philosophical theory will be discussed.

Chapter five is devoted to a comparative study. I will make comparative discussion between Knutpunkten and Shepherd’s Bush station concerned on how the usage of colour and light elements are applied at those stations. And I will give a visual assessment how those elements are playing a role to shape the building visually pleasurable.

In the last chapter, chapter six; the conclusion will come up with the finalization of what I have been studying during this research. I will try mainly to conclude what the

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<sup>10</sup> Meerwein/Rodeck/Mahnke, ‘Light and Color’, in *Color Communication in Architectural Space*, Basel: Birkhauser 2007, P.39.

visual appearance of Knutpunkten has got in terms of problems because of the use of colour and light and how those elements contribute to its visual appearance.

## **2. The Settlement of Knutpunkten**

### *2.1 Geographical Location*

Knutpunkten is located in the middle of Helsingborg city. The region is strategically important for the transportation system along the Baltic Sea and around the northern part of Europe and the Scandinavian Peninsula. Nationally, this place is also important and known as industrial and highly known as one of the Swedish trafficking and busiest communicational facilities area. For instance, the ferry transportation service in every twenty minute during the day time is giving service from Helsingborg to Helsingr city Denmark; and regionally, the national transportation service (SJ) train service accessible to Gothenburg, Malmo and Copenhagen via Hasselholm and Kristianstad, and domestic service between Swedish mega cities Stockholm via Lund to Gothenburg. This fact tells us how the region is important for transportation, and thousands of passengers are using this place. And here is Knutpunkten where located in the center of this important city.

### *2.2 Physical View*

Its physical is located between the southern and the northern part and along by the sea. The building structural set up view is more close to the sea than land; physically, this building set in a position of the southern back part of the building is directed to the southern part of the city and the front part or what is call “the main gate” part is directed to the northern part of the city. The location of this building is the main central part of the city and along by one of the front arcades of the city.

In addition to this, the spatial of this building is physically different from the surrounding building structure. For instance, by side view of this building, the city scheme is referring the patterns of medieval architecture touch. There are some modern architectural buildings around but they are almost invisible because of they are dominated by medieval architecture forms. However, Knutpunkten is not dominating for some reasons. For example, the location of the building is one factor. This building is almost located alone in front of the medieval architectural forms which is sequenced a long line, there is no any building from medieval period next or by side to this building so the power of its dominance in this place is not taken by

medieval forms from visually point of view. The other reason is its size. The size of Knutpunkten building is gigantic when we compare it with the other buildings of this place, physically it is over landed on wide square mater; visually, it is clearly dominated one side of the area, the area which is close to the sea.

Over and above those reasons, the view of Knutpunkten around this place is not dominated like any other few modern architectures, instead its visibility is getting the opportunity to being visible because of its architectural form and its colour and texture elements as well. The building material gives a unique texture impression for the surrounding; many buildings are constructed by brick, but Knutpunkten is not a part of brick construction culture. It built by concrete, iron and glass medium which are reflecting the modern architectural style of the 1990<sup>s</sup>. This gives this building a uniqueness of character in terms of form, colour and texture on the surrounding in order to be visible uniquely.

All in all, the visibility of Knutpunkten is eye catching; it can easily take our attention. Therefore, its visibility over the surroundings is important for the contribution of visual impact since it address our conscious and sensuous faculties. In deed its visual impact on the environment as well is important since nowadays architecture objects is highly connected with environmental healing as Day describes,

“architecture has profound effects on the human being, on place, on human consciousness, and ultimately on the world, it’s far too important to be shaped by short-lived fashion appeal. It can have powerful negative effects, personal, social and environmental”<sup>11</sup>.

Therefore, the physical visibility of Knutpunkten has been playing a role either a negative or positive impact on society as well as environment for the last twenty years. However, the city of Helsingborg is in the process to reform the city is urban plan scheme, so the contribution of this building spatial is vital, and it needs highly considerations since it is still playing the major role for the city in terms of visibility.

### *2.3 Physical Structure*

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<sup>11</sup> Day, P.13.



This building structure is a type of modern architecture. The structure form of the outside of building is; in the southern part view, it is a normal modern building form which is many its body is blocked and covered. This view does not illustrate actually what the entire building looks like, it is like the back view of any other kind of building. Nonetheless, when we come to the front view, the building form is arcade shape. The form which is experienced in the early centuries cities arcades used to structure for shopping mall. This part of the building is constructed by more glass and metal material rather than concrete, so the fact that, this part of the building is an opposite figure to the back side of the building; it has more wide space and sufficient light, and its texture feeling is metallic rather than concrete.

For the better visualizing this building, it is good if I have a look the building in to two parts, the exterior and the interior part of the building.

*Exterior part-* The exterior body of Knutpunkten has also the same character as the interior part. For instance, when we go around the building, we can find different form and material texture in each side view of the building. In order to observe the surrounding I should visualize the back, side and the front view of the building.

*Back View:* - since this part of Knutpunkten is a gate for trains, ferry and buses transportation services, most part of the body or the form of the building is hollow. Nonetheless, there are some bodies which are constructed by concrete cast, and have a cub form windows. Despite the hollow entrances, this view of the building body is blocked when compared with the side of Knutpunkten.

*Side View:* - this body is in front of the medieval city scheme. This gives a two period architectural culture scheme for the city of Helsingborg: in front of medieval city arcade, the appearance of modern architecture scheme gives the two period architecture cultures figure for the city. This part of Knutpunkten is also a blocked form and concrete body, despite; there is one passage way to go in. Actually this part of view has similarity its material and texture.

*Front View:* - the outer part of the building is belonging to the northern part and incredibly different characters such as its spatiality of form, light, texture and colour from the other building bodies as I described on the above about the interior part. This part is totally constructed by glass and metal frames, and the form is shaped arched rather than flat, this form do not exist on the other part of the bodies. This

particular body of Knutpunkten, even though, this building was built in the late 1990<sup>s</sup>, but this part of the building is referring the early malls architectural culture.

In general, we can observe three kinds of physical structures or characters in this building; it's the way of looking of time interval, colour, form and texture gives this building Verities of physical structure. Moreover, we may become surprised if we look at the building from the back and side view and when we go through in. those bodies of the building dose not tell us there are such activities inside Knutpunkten because of the fact that those parts of the building are too much blocked and covered what is going on inside there. To conclude, where ever if we are either we could be at the back or profile side of Knutpunkten, they do not tell or give us the true impression of the inside Knutpunkten.

*Interior part-* the interior structure of the building body is basically divided in to three parts as main forms; the bus station, the train terminal and the main gate which includes the ferry part as well. Each of them has their own structural spatial such as form, light and colour appearance.

*The Bus Station:* - this part is located in the southern part of the building by side of the train terminal. This place actually has a less complicated structural form and colour and comparatively sufficient light than the other parts. This place is structurally a kind of passageway hall form with the wide area of space, teleological with much enough space for the flow of buses trafficking. The shape of this place is the simple flat form which comes from its character of hall. However, there is visually a controversial feeling we could get when we come closer to see it; there is emptiness and monotonous feeling since its colour spatial is monochromatic and there is no other colour appearance that the users can enjoy in it while we stay there.

*The Train Terminal:* - this part is located in the southern part of Knutpunkten and connected to the main gate of the building by stair and electronic stair. The structure form is this terminal is an underground passageway tunnel. This place is also has no more complicated form since it is tunnel shape. In addition, this place has its own character, since the tunnel which is shaped by concrete and have no wide space; actually this is not only the character of this tunnel but also this shape is experienced in any others underground tunnels also.

*The Main Gate:* - physically this part of Knutpunkten is located to northern part of the city. Inside this place we have possibility to observe the space in a wide range. The structural form of this place is as I mentioned it is shaped like the arcade mall shape. Some part of its wall and roof is constructed by a mixed of glass and metal frames and tubes; this character of mixed media construction also can tell us which period the building structure is referring to. According to Julier argument about Leeds furnishing in the 1990<sup>th</sup>, which the time was the same when Knutpunkten built he said “on first glance, the overall image of this scheme is generally European modern. Powder-coated steel, aluminum tubing and granite provide a textural mix which would be equally at home in Dusseldorf as Rotterdam”<sup>12</sup>. Based on his premises, we can understand the period of this building style from its scheme of interior part, because Knutpunkten is constructed with the same material as such steel, glass and granite mediums as he describes. Moreover, this part of building is much crowded since it is the main gate for the whole parts including the ferry gate and a place to have a meeting, and a place to wait till for the train, bus or ship. In addition, inside this area; there are commercial activities such as shops, cafe house “MacDonald” and offices. This gives a deformed or shapeless scheme for the surrounding.

#### *2.4 The Role of Knutpunkten*

Knutpunkten is playing an important role for the city of Helsingborg as well nationally for Sweden in terms of providing a transportation service nationally as well regionally. However, I will not speak about its main transportation function; rather, I would like to discuss what is the role of Knutpunkten with regards to visual impacts. The first impression has always a great impact on our flashback when we think about what we have been observe and conducted by the moment. Our faculty of cognition has been storing many visual objects when we observing during the daily life activities either we are consciously or unconsciously; there is a serious relationship between our minds, body and physical objects as long as our sight faculty working in a normal condition. For instance, when we go around most probably we may observe gigantic objects at first sight because of the size which matters for our sighting; on the opposite, it is very rare case to sight an electric pole or a direction arrow when we visit the place for the first time; even if we are familiar

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<sup>12</sup> Julier, P.123.

with the places, it is very rare to sight those small objects than the bigger ones. We can raise examples, when we visit places or during our daily life activity we may observe and our mind may pursue the city views such as café, shops, gardens, private spaces and so on at the first impression. As Madanipour describes, “the non-physical, inner, private space of the mind is thus highly dependent on the body to grasp the physical, outer space of the world. In the other words, the body mediates between the states of consciousness and the world<sup>13</sup>”.

In addition, architecture is the main object that we can sight easily and address to our mind when we perceive places. According to Day argument about how architecture has a power to address effect he says “architecture has such a profound effects on the human being, on place, on human consciousness, and ultimately on the world”<sup>14</sup>. Moreover, the entire form of architecture has a meaning to say something for the observers as the Italian semiotician Umberto Eco amplifies the role of architecture with regards to communication “the object of use is, in its communicative capacity, the sign vehicle of a precisely and conventionally denoted meaning-its function”<sup>15</sup>. Based on those two arguments, we can understand as a result of architecture how the Knutpunkten building has been playing a role in terms of visual contribution and provoking visually it’s meanings for the surrounding as well for the society, including the people who are visiting Helsingborg.

Knutpunkten, since this building is the first place that we get when we visit the city, its visual impact actually is not only belonging to the habitants but also the visitors and the passengers as well. Rather, such a scheme has a direct relationship with the habitant daily life activities and feelings as Julier describes “It claims urban identity to jest not merely on the appearance of its buildings, in the architectural look of a place, but in the everyday attitudes and actions of its inhabitants”<sup>16</sup>. This impact actually has a consequence of psychological and physiological implications since architecture has something to do with our everyday attitudes. Moreover, Knutpunkten has great advantages to play an important role regarding to visual

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<sup>13</sup> Ali Madanipour, *Public and Private Spaces of the City*, London:Routledge, 2003, P.8.

<sup>14</sup> Day, P.13.

<sup>15</sup> Leach, p.185.

<sup>16</sup> Julier, P.129.

appearance in addition to its transportation function. Because of its geographical location also one of the factor for its significance of place for Helsingborg scheme. Over and above this, as I have stated on the above, the city administration is on the process to reform the city schemes; for this purpose, according to the project magazine have written about describes,

“this brief description the objectives and prerequisites for the coming development of Knutpunkten, the travel centre in Helsingborg. The brief has been out together within the project interaction Knutpunkten. This project is a part of the urban renewal project H+”<sup>17</sup>.

Therefore, since its geographical position is located in the center of the city; its contribution for the future city scheme is vital with regard to intermediate the two poles from a visual impact point of view. Moreover, as Day calls “architecture is such a powerful agent”, Knutpunkten itself as an architectural object, can play as an agent in order to provide a visual impact either negative or positive effects on the society’s sensuous faculty or feeling as well as on the environmental aesthetics.

Moreover, we can divide the role of Knupunkten in to two categories, such as, its role for the society and its role for the environment. So what is its role for those?

For the environment, actually the role of Knutpunkten from an environmental aspect is a kind of sensitive issue which needs deep considerations for the consequences of visual impacts of psychology as well as aesthetics. Every day and everywhere we are perceiving, feel and seeing is the reflection of what we visually observe from the surrounding and objects. Each element of designs which are existing on spatiality of Knutpunkten spatial has a power to shape the environmental image and meaning in terms of aesthetically with regard to reflecting their symbolical meaning on it since it was. Therefore, Knutpunkten has been playing, and still active it is pursuing its visual appearance role with regards to providing aesthetically either suitable or not suitable atmosphere for the surrounding.

On the other hand, Knutpunkten’s role is highly associated with the society, which includes the habitant and people who are using Knutpunkten for the transportation as well as people who are visiting Helsingborg. Indeed, the role of this building for the

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<sup>17</sup> “Summary”, in Knutpunkten 2020, H+ Projektet, 29. 01.2010, P, 6.

society is also highly connected with the role of Knutpunkten to the environment since the society is living in the environment, the environment which is visually linked with this building appearance. We have perceived, observing and feeling from what the environment is giving us that it has symbolical, aesthetical and psychological meanings of element of design. Elements of design which are existing on Knutpunkten has a great possibility to address our sensuous feelings, and also their implication can affect us psychologically either in a negatively or positively way since biologically human senses are strongly conducted with colour, light and form elements. Nevertheless, that does not mean the whole society may have the same feeling or can effect by those elements because the fact is biologically we can't have the same status. According to Riley said "according to two recent studies in molecular biology, a difference in a single amino acid-the minimum genetic difference between two people- can cause a perceptible difference in color vision"<sup>18</sup>.

### **3. Elements of Design (colour and light)**

Elements of design are principal components that we use them in order to structure or construct visual objects such as art works, drawing as well as visual design objects including architecture. Elements of design have different basic tools such as line, space, shape (form), texture, colour, size and value. Every object we see is a combination of those elements in the form of shape or volume that help us in order to identify them. It is a general visual comprehensive of design style that had been playing a great impact on the history of western decorative arts and design culture.

Nonetheless, as already mentioned, this thesis concerns merely colour and light elements. The reason why I have chosen those elements is because of their vital contributions for visual objects such as architectural design in order to give them aesthetical value. However, you may ask why the element of light is included in the main element of design tools? But I have included the light element because it is the

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<sup>18</sup> Charles Riley , 'Introduction: 'The Plate and Table', in *Color codes: modern theories of color in philosophy, painting and architecture, literature, music, and psychology*, Hanover: University Press of New England 1995, pp. 1-2.

most important element which we need to observe visual objects in order to visualize the object itself as well as the form and colour of the objects. On another word, naturally we can see the elements or an object and having visual pleasure is only if as long as there is abundant light exist. In addition, light element synonymously exists in the value element, which element is concern about the degree of chroma and monochromatic tonal values with regards to trichromacy the degree of lightness and darkness of the visual objects.

“Colour has been the phenomena in the subject of experimentation and investigation in both art and sciences” as Gage says<sup>19</sup>. Many philosophers and scientists have been seeking to find out the meaning, characteristics and implications of colours. The origin of colour and light elements has been studied in the history of colour theory; despite there are controversial theories focusing on the nature of colour and light dealing with how they originated and about their independencies of each other as well as what and how we are observe them. Nevertheless, during the seventeenth century scholars comes up with different scientific results which proves the natural relationship and difference characteristics between colour and light elements.

According to Overhem and Wagner’s discussion, “for the first time Isaac Newton came up with much clear scientific concept of the nature of light and colour”<sup>20</sup>. On this study, Newton’s theory has proved that colour and light are originally independent items but their existence is not separable. According to Overheim and Wagner states that Newton shows the colour is exist in light

“with the aid of a glass prism he was able to display the colors that make up white light. For Newton, these different colors represented particles or corpuscles of light different size. He was careful to point out that light itself had no color; rather, the different particles of light were capable of producing the sensation of various colors”<sup>21</sup>.

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<sup>19</sup> John Gage, ‘The Contexts of Colour’, in *Colour and Meaning*, Thomas and Hudson, 1999, P.11.

<sup>20</sup> Daniel R. Overheim and David Wagner, ‘The origin of Colour’ in *Light and Color*, John Wiley and Sons, Inc. Canada, 1982, p. 5.

<sup>21</sup> Overheim and Wagner, P.89.

Newton's research result is more suitable for this study since I am going to cover the colour and light elements independently as a one factor of contribution for visual impact. Everything what we observe in the surrounds is the reflection of colour and light; and the combination of those two elements can shaped a forms that helps us in order to observe the objects. This is a primary process in our visual perception in order to send images to our mind. Many philosophers have been fascinated by the origin of colour and its relation with the human responses. In their theories, they amplifies that the visibility of colour is by means of light as well as the visibility of form that we observe is by means of when the light and colour merge together.

For instance, for Immanuel Kant, colour is kind of an element which provides a visual sensation for the objects with regards to maximizing their aesthetical values. His theory is dealing with the aesthetics appearance on objects rather than searching the origin or the meaning of color from scientific theory point of view. According to Riley stated the Kant's notion,

“By holding color in tight check he pays tribute to its seductive power. For some it takes consideration effort to maintain form or design in the opposition as the requisite of beauty while color is the secondary, sensual enhancement that adds ‘charm’”<sup>22</sup>.

As such his aesthetics judgment is about a beauty in natural objects rather than art, in his philosophy of colour as well the contribution of colour for aesthetics is secondary, instead as Riley says “ in painting, sculpture, and in fact in all the formative arts, in architecture and horticulture, so far as fine arts, the design is what is essential”<sup>23</sup>. However, many philosophers on their theories of colour, their approaches on this issue have been laid on the contribution of element of colour for the object's aesthetics value.

Another legendary theoretician, Johann Wolfgang Von Goethe, had done one of the remarkable scientific researches on the history of colour theory. His theory of colours and philosophical idea is dealing with the wavelength theory of light and colour regarding the observation of the phenomena of colour. Goethe's theory proved that

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<sup>22</sup>Riley, P.20.

<sup>23</sup> Riley, P.20.



colour is the act of show that the active and passive lights from prismatic spectrums and reflections all together can originate colour. His scientific study of phenomenological theory about colour has been trying to resolve many questions which pronouncements by philosophers about the objections and a natural characters of colour as A. describes,

“ his more than half of its devoted to scientific questions about physical, physiological, and chemical caused of colour phenomena, it ventures in to closing disquisition on “moral association” as well as the role of color in a variety of fields such as medicine, music, philosophy, mathematics and art”<sup>24</sup>.

The phenomenon of colour in regards to the visual is highly engaged with it because of it's a law in natural engagement with light and sense of sight. Our faculty of sight is properly functioning is according to the natural law when the light is exist we see the reflection colour of the object as Goethe noted as “all nature manifests itself by means of colour to the sense of sight”<sup>25</sup>. Moreover, Dean also states that Goethe's theory of colour and light is an important factor with regards of the visual since colour is a phenomenon in nature for the sense of vision; what we perceiving as he mentions is that everything we see is because of light and colour. Furthermore, his theory has proved that

“colour and light, is standing in the most relation to each other, but should think of both as belonging to nature as a whole, for it is nature as a whole which manifests itself by their means in as especial manner to the sense of sight”<sup>26</sup>.

In general, Goethe's theory is one of the early fundamental scientific researches on the phenomena of the origin of light and colour with regards to identifying their natural characteristic. His qualitative theory is a basic theory for the study of colour; actually his theory is not only basic for studies but also it is most influential ideology for many philosophers who deal with colour researches such as Jonathan Westphal

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<sup>24</sup> Riley, P.21.

<sup>25</sup> Eastlake, P.52.

<sup>26</sup> Eastlake, P.38.

and Herman Von Helmholtz. Nevertheless, Goethe count himself that his experiments has been dealing and showing merely the law of chromatic harmony.

Similarly, Westphal's philosophy in theory of colour has resemblance with Goethe's theory of colour as he has been dealing with the physiological and the phenomena of colour. Westphal theory also involving on the "phenomenological based of colour in order to answer many of the prevailing psychological and psychological objections of philosophies pronouncements on colour"<sup>27</sup>. He was like other theoretician and colour psychologist who have been supported Goethe's theory concept that the origin of colour is a kind of shadow. Westphal perception of colour theory believes that colour does not have a physical body by itself.

Beside, the German idealist Hegel as well one of the philosopher who inspired by Goethe's colour theory according to Charles argument, "Hegel's work in the philosophy of beauty was directly inspired by Goethe's colour study"<sup>28</sup>. Hegel's aesthetics theory is involving on the relationship between our visual sensuous and an art objects; and our mind has a position in order to decided that the visual object or that art is beautiful or not. As Hammermeister said that "Hegel defines aesthetics as the philosophy of art, or to be more precise, of beautiful art"<sup>29</sup>, in the history of aesthetics philosophy Hegel is the first in the line of philosophers who gives absolute priority for colours; and his long discourse on colour is technically detailed he considered the effect of color in different media such as fresco, mosaic and primarily oil to give generalized when he consider colour symbolism, and generous in its allowance for individual preferences and subjectivity as Riley describes Hegel's consideration of colour in his theory of notion that the inter subjectivity of judge with regards to objects beauty. Moreover, Hegel believes that the contribution of colour is aesthetically for the objects including an art works is to creating a totalizing harmony when which all pure colours appears at once.

Unlike Goethe's and Hegel's ideas of colour, Wittgenstein's philosophy of colour is differing from them. He believes that colour never exists rather it is a phantasmatic

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<sup>27</sup> Riley, P.35.

<sup>28</sup> Riley, P.23.

<sup>29</sup> Hammermeister Kai, 'Hegel', in *The German Aesthetic Tradition*, Cambridge University press 2002, P.92.

idea which exists merely in our mind. According to Riley argument about Wittgenstein notion,

“it entertains the imaginative or at least intellectual possibility of colours that “exist” solely in the mind and could never be realized in the chart or a painting. These are Wittgenstein’s color abstractions, and they confirm the theory that color’s principle status is in the active mind rather than in the passive organ of sight or in an objective medium”<sup>30</sup>.

Though, his understanding of colour is much connected with what we insight the objects and visual sensuous of colours.

Over and above this, colour played a fundamental role in Wittgenstein’s philosophical career. In Wittgenstein’s work, he have been dealing on the interrelations among colour characters of colour propositions rather than focused only on the cases such as psychological, physiological, phenomenology and the origin of colour as what other philosophers have studied. Moreover, he studied the logic of colour rather than theory of colour; He took the account of the characteristics of colour in to the considerations such as transparency, saturation and degree of purity, as well as the effect of different media on the behavior of colour. And also Riley added “the crucial themes of comparison, certainty, knowledge, observation and expression of colour are intermingled throughout his work”<sup>31</sup>.

The other philosopher who has been engaging with colour is the French semiotician Roland Barthes. He tried to relate the effect of colour in multidisciplinary streams in order to connecting them with regards to linking their interrelation of colour on literature as well as art. Barthes amplified the uses of colour with regards of playing an aesthetics role as Riley says “Barthes uses colour as an index to the aesthetic value of the work”<sup>32</sup>; his colour notion is giving an advancing lever for colour in a high position in terms of providing pleasure; for him as Riley added “everything found in nature and a fortiori in the social world is colored”. So for Barthes every art work should be coloured even though it depends on the chromatic value. In addition,

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<sup>30</sup> Riley , P.28.

<sup>31</sup> Riley, P.32.

<sup>32</sup> Riley, P.57.

he was not involving on the meaning and the origin of colour instead his philosophical approach is dealing with every colour what we put intentionally has implication or factor. Either the colour which we put from subjective or individual desires but its presence or effect is on the object as Josef Albers said “ in order to use colour effectively it is necessary to recognize that colour deceives continually”<sup>33</sup>.

Colour’s problematic issue is not only about its origin but its contribution of aesthetics for objects. Researches show there is a millions colours existing but our vision capacity is limited to see those entire colour types. However, there are many surpasses colours more than we can imagine the quantities that we are living with them. Each and every object of our surrounding is colorful; and in the rare case, at least objects are coloured with less saturation of intensity such as white or gray. Probably it is impossible to find single objects which do not have colour so to speak.

The characteristics of colour are interpreted in to two major contradicting groups; cold and warm colours. This categorization has comes from the metaphorical of their psychological meaning and symbolical implication of the beholder’s feeling or response. For instance, the usage of colour for signage is intended to describe the things psychologically by metaphorical expression, such as, a sign of “inflammable” represented by orange colour. Colour temperature start to divide right after the complementary step. Our natural sensitive response to colour makes that the contribution of colour is an important factor in our life with regard to using them for visual pleasure. Our daily use of objects up to physiological maintains is highly connected with the colour directly or indirectly. Colour, its character exists briefly in a temporary way in our eye as a result of action and re-action by means of transparent through light mediums, and the prism, the physical colours are forceful and strongly expressive beauty. Even though the existence and the characteristic of colour is depending upon light to display its existence on objects but as Goethe said “colour is at all times specific, characteristic and significant”<sup>34</sup>.

In many design fields, the predominant colour is the major criteria for their qualities. For instance, in the fashion design industry, the value of colour is taking the first step as a target more than the material property and style in order to break through the

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<sup>33</sup> Riley, P.154.

<sup>34</sup> Eastlake , P.277.

market as well as to get the user's attention. In fashion design as well, even though the choice of colour is laid on subjective preference of the users like any other preference of colour but there is logic in this field that the designers have a professional duty to forecast colour in terms of compel or reinforce the user's interest by means of using evocative power of colour.

Designers can encourage the user's interest with the help of colour; as Gage describes the "subjective outcome of an objective process of colour is stimulation"<sup>35</sup>. In addition, by using different colours to change its models it is possible to design varying styles or objects as Overhiem and L.Wagner says, "when we change from one of these illumination to another there are rarely any gross change in colours"<sup>36</sup>. This design culture based on colour variation is actually highly practiced in industrial design. There are the same model production sequences but different colour types; even there are products in one colour type but produces with diversified tonal values, for instance, motor companies they produces a car in one model but with many colour saturations. This is professionally intended in order to control the user's interest by providing products according to their type of colours. This also perfectly works from marketing point of view since psychologically colour has a power to insist and its unique characteristic of making stimuli which affects people desire in a special way.

Mean while, the same trend which is experienced on the industrial design culture, this experience also reflect on architectural. The importance of colour and light in architecture is vital for the contribution of its aesthetics appearance as such Goethe's describes "colour considered as an element of art, may be made subservient to the highest aesthetical ends"<sup>37</sup>. Architecture, beside its teleological it is a major object regarding contributes aesthetics for the city scheme. And the usage of colour and light elements on this field as well is much essential more than anything else because of its natural character of strong relationship of psychological, physiological and pathological with the users. Our sense of those elements radiance is actually is not limited to on our sight but there is a research that result shows that there is a

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<sup>35</sup> Gage, P.11.

<sup>36</sup> Overheim and Wagner, P.53.

<sup>37</sup> Eastlake, P.304.

possibility that we can sense colours with our skins even if we closed our eyes as the French psychologist Charles Fere's experiment shows according to Gage<sup>38</sup>. Therefore, according to his experiment there is no possibility to escape from surrounding colour influences since almost all objects which are found around us are colored.

The existence of those elements on architecture, with any means of qualities and quantities has a direct relationship with the users and environments as well. Every elements of design visually has a power to affect our sensuous faculty either consciously or unconsciously in a negative or positive impact as Itten describes "colours are forces, radiant energies that affect us positively or negatively, whether we are aware of it or not"<sup>39</sup>. Each elements of design on the architecture has an implication on the observer's sense since every elements of design has their own psychological and symbolical meaning or message. As C.Miller describes, "our immediate response to colour is in terms of what it mean, what it says to us, and colour meanings are far easier to grasp than colour as an abstract elements"<sup>40</sup>. Moreover, beside the role of colour, elements of light are also playing an important role with regard to our response to architectural objects as Battle and McCarthy mentioned "light creates space and emotion, and should be one of the principal media of the architect engineer"<sup>41</sup>.

However, these problems existing in many places and most of the time, abundantly does not consider to resolving the problems regarding the relationship of the appearance of elements of design at buildings and our response for it. For instance,

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<sup>38</sup> Trevore Lamb and Janine Bourriau (edt), 'Colour and Culture', in *Colour: Art & Science*, Cambridge:university of Cambridge press, 1995, P.189.

<sup>39</sup> Itten Johannes, 'Introduction', in *The Elements of Colour*, London: Chapman and Hall 1988, p. 13.

<sup>40</sup> Mary C. Miller, 'colour is communication' in *Color for Interior Architecture*, New York: Wiley 1997, p. 6.

<sup>41</sup> Guy Battle and Christopher McCarthy, 'Multi-Source Synthesis Towards the Light', in *Architectural Design*, Maggie Toy (ed.), UK: Academic Group Ltd. Vol.120, 1996, p. 2.

visually many buildings are not suitable or attractive because of their choice of the elements of design especially the usage of colour and light elements. There is serious negligence of the psychological and symbolical meanings of elements of design; and it is obvious that it addresses and affects the observers or the user's senses without any limitation of time, place and condition even if Minah says

“colour has been used in architectural for the last twenty years, colour theory as part of an objective methodology for design in which colour becomes part of a conceptual understanding of architectural form in the design process, or is used as a critical tool for evaluation, seldom enters architectural design education”<sup>42</sup>.

Despite such considerations taken in to account in few places but the fact is probably it is difficult to find equal considerations about the usage of colour in all round the world; most developed countries are already restricted their type of usage of colour on architecture, means they have certain colours regulation to use. But on the other hand some others countries like developing countries does not have limited colour usage on the architecture yet. Moreover, biologically the relation and response emotion of the human visual sensibility with the element of colour is highly associated more than any other things. As scientific results show, there are some animals that cannot identify colours; as such there are also some human beings who cannot identify the colours as Overheim and L.Wagner says, “information can be discovered by examining individuals who do not experience normal colour vision the so called colour-blind people”<sup>43</sup>. However, as I mentioned our visual sensibility is sensitive to colours that we observers according to Frisner's argument “more than any elements of design, colour has the ability to make us aware of what we see”<sup>44</sup>. These premises can show us how much our cognition faculty is engaged with colour.

The responsiveness of our visual perception towards the objects which are found surrounding us can be affected by their surface texture, form, light conditions and

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<sup>42</sup> Minah Galen, Maggie Toy (ed), UK: Academic Group Ltd.Vol.120, 1996, P.11.

<sup>43</sup> Overheim and Wagner, P.88.

<sup>44</sup> Anderson Feisner, Edith (ed.), ‘what is colour?’ in *Colour: how to use colour in art and design*, London: Laurence King, 2006, p. 2.

colour. To recognize the objects we see, our faculty of cognition needs a preconception of the object's image such as its form and colour contents to cognize the objects as D.Zimmer and Steiner arguments describes

“in all experiments colour change should impair episodic recognition because the episodic token presents all features. Additionally, if with this more difficult perceptual conditions object recognition uses a representation of the specific exemplar that includes colour, colour changes should also influence object recognition if colour has a higher impact on performances”<sup>45</sup>.

Every image we see needs to be converted in our brain system in order to recognize the objects, so every form and colours we see are have direct involvement with our psychological and physiological additive since they belong to our eye in health state.

#### **4. The contribution of Elements of Design at Knutpunkten**

Like any other architectural design, at this building the contribution of elements of design is playing an important role for its visual appearance. Visually there are kinds of sensitive elements for our sense that we could easily embodied and responses to them such as colour and light elements. Colour, naturally its character is the immeasurable evocative medium inspire element to provoke us directly intuited and the existence reaction in the observers. Moreover, colour is the element which helps us to communicate with Knutpunkten as Riley says “being a symbol of architectural purity, colour becomes the basis for a symbolical system of correspondences that are rhetorical”<sup>46</sup>. Colour is the element which is belonging to the environment, and it is a tool that the observer uses for information and communication with the surrounding. The purity of colour that we observe at Knutpunkten building is basically white colour values which are dominantly the chroma of the building purity almost the whole part of the building body.

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<sup>45</sup> Hubert D. Zimmer and Astrid Steiner, 'Colour specificity' in "Episodic and in perception object recognition with Enhanced colour impact", *European Journal of cognitive psychology*, Volume 15, 2003, p. 353.

<sup>46</sup> Riley, P.212.



In addition, the light element also plays a role in cooperation with colour for its aesthetic spatiality as historically as Rush argues “the aesthetics of light has a long history in which light is often considered in relation to other aesthetic qualities like proportion, form, linear movements, etc”<sup>47</sup>. Visually the lights contribution the same as like what other elements are done for the spatiality of Knutpunkten. Even though, most of the body is painted in white colour there are some parts such as the ferry part that is painted with blue colour at some parts. Nonetheless, in order to piloting the appearance of those elements, it is necessary to visualize the building body individually as such structural arrangement.

*4.1 The Train Terminal Area*, in this part of the building, the painted bodies such as the ceiling, columns, wall and the ground part is painted with white colours. However, on the ground the marble colour is not pure white colour, it is mixed with bright ochre colour. The colour of the tub wall on both sides is deliberately left to any colour, so the wall is a natural concrete colour. The natural light element in this part is certainly limited since it is underground tub, however, the artificial light system is providing somehow instead of day light. The appearances of light and colour elements around this area of Knutpunkten is much less than compared to the rest of the building parts due to the reason of its being underground. Because of its nature this place is highly in needs of a sufficient light system in cooperation with the colour to prevent the place especially the tub wall from the darkness. For instance, when we look at the front towards a head of the Southern gate the tub is getting darker because of the absence of light.

In this particular area the combination of light and colour elements in terms of providing visual pleasure and aesthetics is limited because of the lack of composition of those two elements. For instance, the property of colour on the wall around this area is not painted with any type of colour and in addition the lack of sufficient light gives this places unfinished feeling and we may come up with this feeling since the observers encounter these combinations of elements design continually. In addition, even though the choice of colour in this case depends upon subjective preferences but there is a possibility that the power of colour may enforce us to put this visual appearance of those elements of design in a certain evaluation as Overheim and

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<sup>47</sup>Rush, PP.31-32.

Wagner argument describes “in all phases of life we are continually making judgments based on the colour of the material that we encounter”<sup>48</sup>. So based on their argument the observer could judge this spatiality unfinished.

All in all, as the contribution of light and colour elements are problematic because of its disarrangement. Particular places such as the tub wall is affect but on the other hand there is I should mention about that the combination of those elements are playing an important role for this area, somehow this area dose get a brightness of atmosphere particularly on the pavements and the ceiling which gives visually pleasure for the passengers at list while they are waiting for the train (see figure 1 below). We can imagine this place if the pavement and the ceiling are not painted in certain colours like the wall here what the observers would have feeling over feel when we are waiting there for a while. Therefore, even though according to Michel’s notion “ the upper portions of the spatial envelope most often are the location of the light sources”<sup>49</sup>, despite the playing limited role of light and colour elements around this part of Knutpunkten, the contribution of those elements are playing a role in terms of breaking the darkness of atmosphere with some degree.



Figure 1, a view of train station at Knutpunkten taken by Zekiros Melesse 2010.

4.2 *The Bus Terminal*, respectively this part of Knutpunkten much is prevented from the darkness spatial comparing to the place of the train one. The importance of

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<sup>48</sup> Overheim and Wagner, P.59.

<sup>49</sup> Michel Lou, ‘Role of Structural System’, in *Light: the shape of space: designing with space and light*, New York: Van Nostrand Reinhold 1996, p. 181.

colour and light are essential for this part; also in order to keep the user's feeling in a right position and aesthetically providing visually pleasurable bright atmosphere. The appearance of colour actually at this place is totally painted white colour so to speak except there is a natural ocher colour of the wooden gates and the black painted of the doors and windows frames. We can observe the omnipresence dominancy of white colour everywhere in this place such as on the walls, ceiling and columns as well are full of white. Nonetheless, the glass parts of the bodies are free from this dominancy (for further see a figure 2). Even though, there are coloured objects, reclaims and signages which are gives a little bit of coloured sense for this surrounding but it is not proper to determine them as a main body of this building since they are additional. Therefore, if we do not consider them as an architectural body it is clearly visible that the dominancy of white colour over here.

The appearance of light elements at this part of Knutpunkten as well play a remarkable role with regard to making the place scheme brighter in cooperation with the white colour. Beside, the contribution of those elements, its architectural design also has a factor in addition. Some parts of the room bodies are constructed by glass, so that its transparency character is a factor in terms of transmitting light through the rooms. In general, those two elements to their characters are associated with a feeling of brightness so the possibility of this place of being dark as such the train terminal is so rare.



Figure.2, a view of Knutpunkten from bus station taken by Zekiros Melesse 2010.

*4.3 The Main Gate*, Mean while, the contribution of colour and light elements seems to be working better on the main gate and the ferry part of Knutpunkten visually compared to the train and the bus station. Of course such a kind of technical

finishing means decorating by putting sculpture or garden design at the front part of the building rather than the other parts. This idea has a relation with aesthetical the appearance as Conway and Roenisch describes this style is “is often designed to impress visitors”<sup>50</sup>. In fact the appearance of colour at this particular place has something common way of representation like the other parts have. For instance, the disposition of white colour regarding its intrinsic is highly reflecting; it is clearly visible the predominance of pure white colour especially around the main gate part, each columns, structural frames, walls and ceiling are painted white. However, the metallic body of this part of Knutpunkten is painted grayish but its saturation is not far from white colour.

Interestingly the colour applied at the ferry part in a different way the practicing of colours is reflecting. There are a dark blue colour columns and one part of the wall which gives a coloured scheme for this place. Nonetheless, like other parts of this building, this place as well does not escape from dominance of white colour since the blue part and white part of the body are not equally balanced. Moreover, practically speaking the combination of colour and light elements is working well for the surrounding brightness. This place has many exposures to get sufficient light from nature as well as the brightness of properties or building bodies (see figure 3). As we can see below the Colour and light elements incorporation makes this place brighter. Despite this, we should take in to account the contribution of its architectural form itself for this lighter atmosphere.



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<sup>50</sup> Hazel Conway and Rowan Roenisch, 'The Exterior', in *Understanding Architecture*, London: Routledge, 1994, p. 100.

Figure 3, a view of Knutpunkten around the main gate, taken By Jiyeon Chung 2009.

In general, the over view of the appearance of colour and light spatial at Knutpunkten is helping hand in hand with its structure in terms of providing extra brightness to what the envelope needs of additional illuminance. However, personally the regarding usage of colour which is as I illustrate the dominance of white colour is I am not sure aesthetically and psychologically it is a proper colour usage on the whole spaces or bodies. Because such appearance visually doesn't tell us symbolically the places function as Meerwein/Rodeck and Mahnke says "a monotonous, simplistic colour scheme has a disorienting effect and conveys no clear spatial identity"<sup>51</sup>. In addition, as they amplify "the overall design of a building and its space should reflect a clear purpose. Based on their symbolical meaning and associative effect, colours are able to symbolize functions"<sup>52</sup>. So based on their argument there is no colour usage which refers the space functions except there is a blue colour on the ferry station part that could refer the blue colour as a semiotic to signify the blue water.

#### *4.4 Conflict and Relationship*

The appearances of colour and light elements at Knutpunkten have a conflict and relationship to each other at some extent and this phenomenon is visually cognizable. The word that I use [conflict] is to refer the absence of one of two elements to each other since the final consequence will be visually conflicting. And the word [relationship] is to direct the cooperation of colour and light working together. As we have seen on the above, those elements are shaping the Knutpunkten spatial design character even though the quality and value is differs from place to place. Indeed, as I believe the colour and light element needs to help each other for the advanced design scheme; despite the British modern architect Stirling says that "the colours actively exercise their autonomous power without need for, and in defiance of, the coloured elements of the setting and the rest of the building"<sup>53</sup>. Nonetheless, at Knutpunkten the autonomy of one of two elements is not capable by itself because there is visual uncertainty of their significance alone without the help of another.

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<sup>51</sup> Meerwein et al, P.72.

<sup>52</sup> Meerwein et al, P.73.

<sup>53</sup> Riley, P.218.

The cooperation of colour and light at the ground train tub at this building it seems has a conflict since visibly there is a lack of acting those two elements together. For instance, as we can see on figure one, this underground tub wall and some parts of ceiling is not painted with any colour; we can raise this character itself as one problematic factor for this scene. But further more this place highly needs sufficient light supplement in order to be visible from the surrounding at the first step even if the significance of colour is vital in addition to light. Despite, the value or type of the natural colour of the concrete wall has formed this scheme; light as well is an important primary medium which an architect should taking account as Battle and McCarthy argument “lighting design briefs must extend beyond the prosaic minimum specification, inviting architects to sculpt light as they do space”<sup>54</sup>. However, the lack of luminaries of this tub wall shows that the lightness or brightness values of the finishing material dose not contribute particularly this place. In fact, at this place it might be difficult to identify the conflict of those two elements since at list one of two elements are not visibly applied yet.

However, at this part of Knutpunkten as figure one shows; this part is not entirely shaded under the conflict of light and colour. There is spatial well combination of light and colour elements on the pavements, columns, ceilings and some parts of walls which is amplifies the contribution of those two elements acting together in order to provide a brighter space. When we realize the importance of this brighter space in terms of contributing the lightness of atmosphere we do realize how the relationship of light and colour gives life for this particular single space. The white colour marble columns and walls, ocher with the difference saturations scale and yellowish lighting character composition is balancing the darkness. This phenomenon of light surface lightens up the surrounding even if it is limited and cannot reach out to the walls. To sum up, the appearance of the reflection of colour and light is a source for the brightness as Liljefors states “another aspect of colour in room is that the colour of the surface are of great importance to the light character in the room”<sup>55</sup>.

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<sup>54</sup> Battle and McCarthy, P.3.

<sup>55</sup> Monica Billger, ‘Colour Combination Effects in Experimental Rooms’ in *Colour in Enclosed Space*, Department of Building Design- Theoretical and Applied Aesthetics, School of Architecture, Chalmers University of Technology, Göteborg, 1999, Part, 3, p. 7.

The cooperation of colour and light elements has a relationship rather than a conflict at the bus station part of Knutpunkten. For the brightness of this place, we see how the applications of those two elements are helping each other in order to provide illumination. For instance if we take the station part particularly which is shown on figure two the ceiling lights gives additional brightness for the columns in addition to its bright white colour. Moreover, the surface of this place is characteristically it is shiny when it receives light, either artificial or natural light. Light is reflecting through glass walls, and the appearance of this catoptrical is accompanied by reflection of white colour from other bodies such as walls and columns. However, the other direction of this place particularly inside the bus waiting area which cannot get sunlight due to the reason of its structure actually has got a problem because of the lack of the combination of light elements. Even though, the colour of the surfaces at this place is similar to the others but only the absence of day light or even abundant artificial light and the form the building, means the ceiling height gives this place a dark atmosphere. There are some lights on the ceiling but they cannot break the darkness.

The combination of those two elements is working well together at the façade of this building compared to the train and bus station scheme. The brilliant splendid of the appearance of colour and light cooperate for the view of such brightness and opened atmosphere; the relationship of bright white colour and natural light are contributing an enormous value. As we have seen in the above, some part of the bus station space is getting darker during day light because structurally the ceiling is short and the natural light also cannot reach in to the inside. However, on the opposite the façade of Knutpunkten as Michel says “when the structure form is preconceived to dominate a building design, the major interior spaces are affected both in layout and shape”<sup>56</sup>, the interior spaces of this façade is related directly to its form. Structurally its form, the glass roof and wall which also direct the entry of day light to provide this place in order to get a natural light in addition to the artificial light system.

Moreover, this character is working during the day time because light is transmitted even if the artificial light is off. For instance, as figure three shows, the artificial

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<sup>56</sup> Michel, P.141.

lights on the ceiling are off but there is no conflict on the brightness of this space since it has a possibility to replace or get abundant natural light. Meanwhile, regarding the luminescence at night time the, artificial lights on the ceiling and billboards support the rest of the building body in order to keep the brightness of atmosphere during night as well. The same appearance colour and light are working during the day and night time at the ferry spatial.

What we understand of the cooperation and the conflict of those two elements at Knutpunkten are that they shaped the spatial atmosphere. In did as Michel says “a room is given volume by structural member and interior partitions, and is coloured and textured by surfacing materials”<sup>57</sup>. As such the contributions of those elements are visually depended up on one on the others in order to shape. As we can see the contribution of colour, at the ground tub wall the absence of colour and light cannot play a visual role in terms of providing brightness. However, at the façade and ferry part, even though the material is different from the ground tub wall but the coloured coated roof plays its role in terms of shaping the lightness atmosphere spatial envelope during the night time. Moreover, as Michel describes that the relationship of light and colour “the presence of daylight in an interior strongly influences spatial perception and also changes the colour of surfacing material in terms of how they appear elsewhere in the room”<sup>58</sup> this is what we can see in the experience of the appearance of light how the colour spatial in the ground tub and façade.

#### *4.5 Aesthetic Appearance*

The word aesthetics for most people seems to be the idea concerned merely with the understanding of a fine art works, mainly painting with regard to beauty even though as history show us the way how we look at beauty and judge either something is beautiful or ugly depends upon our subjective preference and what kind of philosophical approach we are following. In fact many theoreticians have different philosophical understanding about Aesthetics as such. We have seen in the above their understanding about colour. The history of aesthetics on architecture in deed has been understood differently from period to periods; numbers of thinkers have been dealing to provide architecture with different meanings and contents. For

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<sup>57</sup> Michel, P.172.

<sup>58</sup> Michel, P173.



instance, during the modernist period was emphasized, Immanuel Kant, one of the great philosophers of the Enlightenment, in his consideration about architectural aesthetics says it should be functional in order to count as beautiful as Winters describes “architecture consists in the making of beautiful, each brought in to the word to serve our purposes”<sup>59</sup>. Nevertheless, there are philosophers relatively opposite to ideas of functionality as architectural aesthetics such as Ernst Bloch, for him “functionalism had paralyzed architecture and stripped it of all imagination”<sup>60</sup>. However, the formalism on the other hand they consider beauty regards emphasizes structural elements and artistic techniques.

The aesthetics appearance on architecture is like other forms of arts, as paintings, literature and sculptures. It is not just only the composition of forms, colours and lines makes the buildings visually beautiful but also like other works of arts architecture has a concept which gives a conceptual beauty in addition to its elements, structural and technical beauty. Therefore, as my observation the Kant’s notion and the formalists’ account of aesthetics on architecture are suited for the discussion about the appearance of Knutpunkten’s aesthetics. When we take Knutpunkten under Kant’s notion as Winters describes “a work of architecture, let us say a building, is a beautiful building in that its being designed to serve our purpose constrains our response to it as a beautiful object”<sup>61</sup>, we will not be doubtful on its aesthetics if we have an opportunity to be there for short period of time. Since for him functionalism is an essential consideration for beauty, nowadays Knutpunkten functionally is working everyday on advance level. Thousands of passengers are using the train, bus and ferry transportation in everyday.

Over and above this generous service for the city, this building also played an important role in order to hub those transportation sections in one place. This is a great concept with regard to providing a multi transportation system at one place and easy to get those facilities at one place. In addition to this, when this building was constructed the idea was to supply a center or meeting point place for the people,

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<sup>59</sup> Edward Winters, ‘Modernism’, in *Aesthetics & Architecture*, London: Continuum, 2007, p. 32.

<sup>60</sup> Neil Leach, *Rethinking architecture: a reader in cultural theory*, London: Routledge 1997, p. 41.

<sup>61</sup> Winters, P.38.

despite this purpose, due to many reasons is not achieved the goal as the purpose of transportation service achieved. Therefore, the achievements of Knutpunkten regarding functionalism it is qualify able to be called aesthetically this building is beautiful according to Kant's aesthetic judgment of architecture in modernism since Knutpunkten is perfectly working from a teleological point of view.

On the other hand, when we connect Knutpunkten with the concept of formalism's aesthetics of architecture, we should raise its structural element and artistic technique. So it is necessary to see the appearance, representational and in expression of elements, mainly elements of colour and light with which this thesis is concerned and the structure of the building body itself as artistic technique is with regards to aesthetics from formalism point of view. Like other form of fine art and sculpture, architecture also has a capacity to description and depiction, even though its power in terms of representation is not a powerful agent such as music and fine arts. With this capacity, there is a metamorphic architectural design which represents the visual world on their form and colour regarding imitation of nature as well as their purpose. Knutpunkten, the representation of its colour, even if visually it is not representing anything connected to historical or the purpose of the building despite Conway and Roenish describes the building form is represent its function "The way architecture has designed the building to take account of the weather or express the status or function of the building, largely determine what we see as we approach"<sup>62</sup>, but no one can forecast the function and what is going on there and inside as well from a distance by looking at the form and the colour representation of Knutpunkten.

Furthermore, the representation of colour at this building is not evocating its purpose instead if we take the property of the colours at Knutpunkten as a brand or mark of this building, the colours could be the independent expression of this building from a semiotic perspective since this building express only its own as Conway and Roenish argue

"Another way to think about the exterior form of building is in terms of the structural elements that are essential to making them stand up. Some

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<sup>62</sup> Conway and Roenisch, P.96.

buildings openly express their structure; in others it is given little prominence”<sup>63</sup>.

The appearance of colour at Knutpunkten has an important contribution for the environment means particularly for the surrounding central Helsingborg. In this case we should visualize this building under the formalism account of structural elements and artistic technical with regard to the role of architecture aesthetics. Remember, as a Visual Culture student I am only engaging with the visual elements merely colour and light because I believe they are the important structural elements for visual appearance of buildings. Knutpunkten, its most part of body is accessible to view, and its volume also matters for contribution of its aesthetics spatial for the environment.

Aesthetically, despite there are buildings coloured with a natural brick but on the side view of this building the white colour painted buildings with varies saturation are outnumbered. So the appearance of Knutpunkten with the properties of bright colour which is a similar colour and value with the surrounding buildings colour that makes it is playing vital role for the surrounding visual scheme in order to balance the environmental colours. As we know in fine arts and design, balancing such as colour, form, line and value or volume is an essential matter for the composition in order to balance the visual spaces. Balancing is to put those elements on another place in order to balance the motive which is strikingly emphasizing its importance by Itten “there is great power in everything rhythmical”<sup>64</sup>. The same experience as my observation according to Itten’s premise, this building with the appearance of similar colour is balancing the city colour composition with regard to repeating the motives and colours. Despite repetition elements also has its own impact.

This building appearance makes the city scheme balanced with colour which helps the environment’s scheme with regard to an aesthetics point of view. However, when we look at the inside part experience of this building in terms of colour balancing aesthetically I don’t have a confident word to say it is well done. Because as we have seen the dominant of white saturation is not balancing with subdominant colours

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<sup>63</sup> Conway and Roenisch, P.112.

<sup>64</sup> Johannes Itten, ‘Rhythm’, In *Design and form: the basic course at the Bauhaus*, London: Thames and Hudson 1975, p. 129.

despite there is an attempt to balance at the ferry part. This is important for the visual scheme as Meerwein, Rodeck and Mahnek account “the subdominant colour is the aesthetic complementary colour. It harmonize with the dominant colour and serves as a contrast”<sup>65</sup>. The usage of colours on the buildings needs much concern as much as when we put colour on canvases since the result will help to balance the city space and form as Toy said “the use of colour in architectural is no exception, serving to dramatically affect perception of architectural space and form”<sup>66</sup>. Therefore, as Toy’s argument the appearance of such balanced colour at Knutpunkten is can serve balancing the space and form of the environment. Moreover, the use of colour on architecture is shaping the appearance of the body; as Pet Mondrian and Theo Van Doesburg describes “the three-dimensional properties of mass and volume as antithetical to their movement, and they attempted to counteract and destroy these formal characteristics through the use of colour”<sup>67</sup>. So we see how the power of colour is working for the city’s aesthetic scheme. However, we can raise the appearance of Knutpunkten’s colour for the better constructive rather than it is counteract or destroy the city scheme because as we have seen its role for balancing itself is formidable for the city of Helsingborg.

The aesthetic appearance of Knutpunkten despite as Kant’s notion focused on functionalism which is directly connected with users but its aesthetics also visually has much relationship with the environment in addition to the society. Indeed the factual dispute is, the societies are not only considering this building as a number one or single performing for the city aesthetics scheme but when we consider its geographical position and its volume facts, it makes this building’s aesthetics appearance much connected with the environment rather than society since visually we have a possibility to grasp the wide environmental impression at the first sight.

So we might be curious to know what the relationship Knutpunkten’s aesthetics has with the society. And visually what is the role its aesthetics for the society? When we talk about those issues as Visual Culture student we should raise the visual appearances which contributes for its aesthetics as Itten said “colour aesthetics might

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<sup>65</sup> Meerwein et al, P.72.

<sup>66</sup> Maggie Toy, P.7.

<sup>67</sup> Galen Minah (Ed). Maggie Toy, 1996, P.11.

be approached from three directions impression (visually), expression (emotionally) and construction (symbolically)”<sup>68</sup>, at Knutpunkten, how those three directions are connected with its colour space since the society visually observes the colour more than its form or structure because of the eye catching and evocative characteristic of colour.

We the society, “the observers”, in our relation is much connected with the entire aesthetics of the environment rather than a single view since naturally our visual capacity we are capable to see a wide range of direction or space. So in this case we have two possibilities to get the Knutpunkten’s aesthetics output, indirectly from the city space which means from the surrounding of this building and the other is directly we can get also specifically from the building itself. As Itten says visually the spatiality of Knutpunkten’s colour gives us an impression even though it depends on our subjective response to it. But for me this spatial gives me how the monochromatic usage of colour is dominated during the modernist period. This is how as Gadamer argue “architecture, no less than the other arts that it embraced, has an ontological role of ‘representing’”<sup>69</sup>. Personally the dominant of white colour spatial has an impression that this building is representing a white colour was leading by the time when it was built, for me as Lancaster said “white was and remains in the common perception, the colour of the modern movement, as it had been the colour of Neo-classicism”<sup>70</sup>.

The expression of the Knutpunkten’s chroma is showing us that this building is under the dominance of the whiteness spatial surrounding. This expression, emotionally we can feel it how the colour redundancy is shaping this scheme. Our faculty of seeing and sense cannot provide us a visual pleasure because of the monotonous feeling that we received from the surrounding redundancy of colour which is connected with the importance of variety of colour for the city scheme as well as for our visual sense or pleasure as Day argued “if sensory qualities, however appropriate, are to bring joy and refreshment to the soul, we need variety not endlessly the exact correct

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<sup>68</sup> Johannes Itten, ‘Introduction’ in *The Art of Colour*, John Wiley & Sons, Revised Ed, 1997, P.17.

<sup>69</sup> Leach, P.125.

<sup>70</sup> Lancaster Michel (Edt) Maggie Toy,P.24.

temperature, lighting level, the same view, the same sort of the shapes, space, or movement through space”<sup>71</sup>.

Nonetheless, despite the role of the aesthetic appearance of this building visually cannot make the verity in terms of colour but the referring of the period which the building was constructed is playing an aesthetic role in terms of symbol with regard to harmonizing the city scheme with the different periods of architectural styles as Day said “for harmonious surrounding in which we can feel alive, at ease and peaceful enough to feel ourselves, architecture needs to be based on this conversational principle”<sup>72</sup>. All in all, the contribution of Knutpunkten in terms of aesthetics is an important Helsingborg city figure. As we have seen its remarkable functional system, means the facility of those transportation services at one place is beautiful from teleological point of view as Kant’s philosophical approach. However, as Adorno says “functionalism in architecture can never be pure functionalism”<sup>73</sup> we are not getting or benefitted only from its functional beauty furthermore the dialectal of its structural and colour appearances also has been playing an enormous role with regard to the role of physical aesthetics rather than what it was designed for as formalist approach, this is as well we could get from it.

#### *4.6 Psychological Influence*

Human beings biologically the faculty of our sense of sight, the process of sight highly associated with mental phenomena more than any other faculties of senses. Such a natural activate is alert as long as the sense of sight is active. This interrelation between the sense of sight and mental process is the source of psychological state that we have. We can classify its implication on the observer’s response either a negative or positive effects that could affect our mental states. In a daily life activity there are unaccountable things that we are observing consciously, subconsciously and unconsciously. From those things architecture is one of the main objects among them. Architecture, its volume let me call it “the gigantic manmade object” and its existence in a surpass quantities those factors makes an architectural objects is close to our sense of sight which is expresses “it is our most

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<sup>71</sup> Day, P.83.

<sup>72</sup> Day, P.84.

<sup>73</sup> Leach, P.5.

comprehensive perceptive faculty”<sup>74</sup> by Meerwein/ Rodeck and Mahnke. In addition, as I have said since the biological human attachment with shelter is highly engaged in order to live as well the work place, this relationship also makes our relationship strong with architecture.

Our visual relationship with Knutpunkten as a result of architectural object is connected in two ways such as our direct relationship with the building itself at the first hand and the second is indirectly relationship with environment which is this building contributes its visual appearance for the surrounding as Itten amplifies “colour have dimensions and directionality of their own, and delineate areas in their own”<sup>75</sup>. When we rise the issue of our visual relationship with this building is, its aesthetics appearance has a great impact on our visual experience as well as on the environment space. Its colour spatial and material situation is psychologically those we encountered in this environment in the daily connection with it is either consciously or not is engaged with our physical status as H.Mahnke describes “the human reaction to colour, a colour combination, and to the environment is always initially a psychological one, but it can also result in a physiological reaction”<sup>76</sup>. The colour element “the evocative medium”, its contribution for this building in terms of shaping its spatial is taking the major role. The possibility of colour elements in reaching to our visual sense is faster and more influential than the other material situation. This situation, which is containing such as the textures that we could have a haptic relation with Knutpunkten spatial.

Colour is the first element that it could address to our visual sense according to Meerwein/ Rodeck and Mahnke argument “colours are fundamental elements of our visual perception and environmental experience; they are substance of how we experience the environment”<sup>77</sup>. This premise proofs that there is a direct connection

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<sup>74</sup> Meerwein et al, P.14.

<sup>75</sup> Itten, 1970, P.19.

<sup>76</sup> Frank H. Mahnke, ‘What is Colour?’, in *Color, environment, and human response: an interdisciplinary understanding of color and its use as a beneficial element in the design of the architectural environment*, New York: Van Nostrand Reinhold 1996, p. 6.

<sup>77</sup> Meerwein et al, P.16.

based on colour between Knutpunkten and the observer. In this direct relation even though the choice of colour is laid on our subjective preference but the power of colour impact either it is our choice or not the process is active as long as our mental are active as Meerwein/ Rodeck and Mahnke says “colour is a significant element of psychology, because its effect is based on conscious and unconscious process”<sup>78</sup>. The psychological and physiological impact of Knutpunkten’s spatial on the environment is in fact it is necessary to consider it the inner and outer environment spatial individually.

The outer environment colour spatial appearance of this building as I have mentioned in the above the arguments of Meerwein/ Rodeck and Mahnke concerned on colour that it is what we visually perceived and experience the environment; the Knutpunkten colour spatial gives an impression of monotony. Despite, the façade spatial and the side bodies of the building colours somehow differ but the saturation is almost similar hue. Such nuance colour appearance psychologically the observers have a possibility to perceive a monotonous feeling and experience the environment with a redundancy feeling because there is visually observable the lack of the appearance of polychromy on all sides of Knutpunkten. (See figure four in the illustration for more) Moreover, when the observers responded to this colour symbolism either consciously or unconsciously, their emotional and psychological status will be affected as Meerwein/ Rodeck and Mahnke describes about the usage of colour on architecture “it affects our body and mind deeply, influences our well-being and ‘psychological comfort’. colour atmospheres send signals that direct our action”<sup>79</sup>. The peoples who are working there as well as around are affected by the colour application of this building as Michel said “colour influences the lives of people in our every day environment”<sup>80</sup>.

However, I cannot conclude this psychological impact is addressing all people feelings with the same reaction since our response to colour is inter-subjective as Birren amplifies “conscious reaction to colour or anything else are by no means

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<sup>78</sup> Meerwein et al, P.25.

<sup>79</sup> Meerwein et al, P.74.

<sup>80</sup> Michel, P.88.



necessarily the same as unconscious reactions, and the two may conflict”<sup>81</sup>. But the consensus as show the fact that the colour red psychologically stimuli of warmness. Nonetheless, even if the colour appearance at Knutpunkten, means the building chroma is not such a powerful evocative as such the Red colour but with the less degree it has a possibility to affect the observers psychological and physiological condition as a stimulating writer and researcher Kurt Goldstein said “colour may thus affect the ability of the body to maintain its condition”<sup>82</sup>.

In the inner part of Knutpunkten the light and colour spatial power of this place, psychologically and physiologically the potential of touching our emotional and physical status is much stronger than the outer part according to Michel describes “colour affects brain activities and biorhythms, influencing our mood and feelings”<sup>83</sup>. In addition, since the nature of this place is structurally it is enclosed space, the possibilities of its spatial to affect the observer’s sense are easier. Due to the fact that, observes don’t have a possibility to escape from the influence of surrounding colour spatial either they respond or not as Meerwein/ Rodeck and Mahnke describes “colour affect us and our emotional world, even when we don’t consciously perceive them”<sup>84</sup>. For instance, at the train terminal place the spatiality of colour and light elements could not break the darkness atmosphere completely; even if the observers don’t consciously respond to such darkness but they perceived the outcome of this appearance. There is no doubt about that this spatial can affect the observers psychological status with depression, dullness, low motivation and so on. Moreover, the case of this psychological impact is connected with the observer’s physiological status such as the depression feeling is linked with mental fatigue. Especially this “mental fatigue” will be increased during the long winter season in Sweden.

Actually the spatial of this darkness it is not only this appearance that can affect the observer’s psychological and physiological status. Psychologically despite the

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<sup>81</sup> Faber Birren, ‘Emotional Response’, in *Colour & Human Response*, London: John Wiley & Sons, 1978, p. 43.

<sup>82</sup> Birren, P.48.

<sup>83</sup> Michel, P.88.

<sup>84</sup> Meerwein et al, P.16-17.

lightness spatial stand opposite to the darkness but physiologically as such the darkness has make an impact, the over lightness spatial as well has impact on the observer's status as Birren also argue about such impact he said "high environmental brightness not only handicaps seeing (by introducing a form of interior 'snow' blindness) but also severely constricts the pupil opening of the human eye an action that is muscular and very fatigue"<sup>85</sup>.

However, at Knutpunkten there is no that much exaggerated lightness spatial which can makes fatigue the observers or users mental. But the appearance of this colour spatial, psychologically can address the observer's mental or emotion as many theoretician shows on their researches. For instance, at the façade and the bus station areas the absolute dominancy of white colour with the collaboration of sufficient luminance is psychologically can stimuli or affect the observers mental. As Meerwein/ Rodeck and Mahnke states that "the impression our environmental makes are a source of profound psychological forces"<sup>86</sup> as such the darkness spatial effect can make dull the observer's feeling and such brightness splendid effect is vice versa.

However, the usage of colour at the bus station and façade area does not give a meaning and impression for the people who are attached with those places for while. People are engaged with those places for different reasons; peoples are going there for using transportation service so often, young people going there to have refreshments, to have a meeting with friends and families and so on, for some people those place is a working place and also those places are providing space for the people who do not have shelter. Nonetheless, the usage of colour and light does not designed to considered the psychological status of those all social categories. For some reasons I shouldn't blame the current visual appearance of those place since the users are using those place on their own way.

However, the particular places such as the façade and the waiting place for the bus; the visual appearance of colour and light elements at those places are since they are designed with the account of the user's feelings, it should be consider the user's psychological respond to light and colour. At the façade, the white colour spatial,

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<sup>85</sup> Birren, P.105.

<sup>86</sup> Meerwein et al, P.64.

such achromatic appearance is not welcoming, inviting the users and charming as Kant said. Psychologically the white colour is not inviting colour as the known Swiss-French modern architect Le Corbusier (1887-1965) described about how the usage of white colour applying on architecture by the time he said “the problem can occasionally be that the ‘white cube’ becomes so precious, so clinical, that sensation itself seems unwelcome”<sup>87</sup>. Psychologically welcoming colours are initiating the users feeling to go there with happiness and encourage them to go back there again. But the colour appearance if it doesn’t welcoming the users, their psychological statues will be a vice versa.

The other spatial the same splendid of white colour at the waiting place for the bus is should keep the users desire to stay there with visual pleasure for while when they are there. The usage of polychromatic with a suitable arrangement is providing a visual pleasure for the observers, psychologically it gives a chance the observers to play and enjoy with surface spatial. However, such a white surface spatial is its message to the observers is psychologically it is emptiness as Meerwein/ Rodeck and Mahnke illustrates<sup>88</sup>. In such a compacted are the appearance of mono colour, even the colour which is not go hand in hand with the place purpose, its psychological effect will affect the physiological state. Such dizziness, mental fatigue and so on could happen at this place because of its spatial. (See figure five in appendix for more). To sum up, the appearance of colour and light elements, teleological when it was designed it seems it was not considered the observers responding to it from psychological point of view. This is what we can visually observe that surface spatial should not be totally achromatic.

## **5. Comparison**

In many fields of design, the experience of design culture within the specific periods have similarities on their application of form, colour and light system. The Knutpunkten and Shepherd’s Bush station, the station which is located in London that I prefer in order to compare how the use of colour and light elements are applied on it, they have some common way of usage those elements to some extent except at the ground tub since both of them are built on the last twenty years. However, the use

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<sup>87</sup>Rilley, P.211.

<sup>88</sup> Meerwein et al, P.31.

of colour and light even in the painting can never be absolute similar, so comparing their experience each other will help us in order to discuss how the colour and light elements contribute for their aesthetics appearance with regards to visually suitable and pleasurable place for the users.

As I believe and shows on this study that the problem of Knutpunkten regard its visual appearance is the problem of the usage of light and colour elements. I have stated that there are parts which are visually not pleasurable and affect the observer's psychological and physiological status. At Shepherd's Bush station, despite structurally it doesn't have the transportations service as Knutpunkten have, but the usage of those elements on the underground tube, on passage way and at the façade inside this train station are interesting and comparable with Knutpunkten.

The combination of those elements makes this place very bright; especially there is no darkness on the tub wall through this place. Indeed the tub wall is paint white which is amplifies the brightness rather than fatigue in addition to the light (see figure six at figure appendix). This is what Knutpunkten lacking as figure one shows on the above. When we compare those pictures we can see clearly how the combinations of those elements are vital for the better visual appearance. Since those place naturally needs light in order to be visually good looking, we see how colour and light element are applied on them with different amount and shape them with different spatial.

At Knutpunkten on ground tub wall there is no colour and sufficient light on it at all despite its own natural concrete colour; and as I mention with the support of theory this appearance visually has got a non-attractive value and its visual appearance has an impact on the observers psychological and physiologically. For instance, as I try to discuss about the spatiality of this building with the habitants, some of whom said that they don't feel comfortable and secured when they go there because of the darkness spatial of this place. Visually the darkness itself can show us how this place can be scary especially for the people who have Achluophobia.

On the contrary, at Shepherd's Bush tub visually this place is not scary because of the sufficient lightness splendid and bright colour. The same appearance of this place is goes to the passage way of this building, this arcade is connected the underground tub with facades. At this station on the passage way they use bright colour with sufficient light in order to connect the ground tub with façade (see figure seven in

appendix for more). When I compare those places spatiality I recognize that how the light element is essential for Knutpunkten particularly on the underground tub and the passage ways that they connect the ground tub with façade and the bus station with façade as well.

All in all, the appearance of those elements at those place visually have shaped their spatiality; as my observation and study shows at Knutpunkten on some places the lack of those elements have a possibility to affect the observers psychological status for instance unsecured. On the other hand, the cooperation of those elements at Shepherd's Bush station the brightness spatiality psychologically makes feel secured as I have experienced it for short time.

## **6. Conclusion**

The element of colour, I would like to call “the powerful elements” is playing a prominent role on our visual perception more than any other elements. I can say that colour can't be visible by itself without the help of light in order to be visible. But since I am not discussing the state of the existence of colour, which means that I am only discussing about the colour spatiality which is already exists in some way that we found on the surrounding. The colours that we have on the cloth, furniture, inside the house, on the surrounding objects, and architecture and so on are governing our feeling, thoughts, mood and health state that we have. As H.Mahnke amplifies our relationship with colour “colour is a part of our psychological and biological heritage”<sup>89</sup>. The colours that we are living with it are have a strong influence or impact on the society's psychological, physiological and environmental aesthetic state. Despite, the choice of colour is a self test, but as scholars show in their researches that each and every colour that we use and observe randomly have their own symbolical message and meaning. As I mentioned the appearance of colour spatiality on architecture has more possibilities to affect us more than other objects to enrich the observer's faculty of sight due to the reason of its volume and relationship with the viewers.

The application of colour and light on Knutpunkten building has formed its visual appearance that thousands of observers responding to it either consciously or unconsciously in a daily connection with this building; in fact every observer's

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<sup>89</sup> Mahnke, P.9.

perception, reacting and feeling is on their own way with varying degrees. The inter-subjective respond to colours indeed gives us different impression and meaning. Nonetheless, there are some powerful colours that can compel our faculty with regard to give a common feelings. For instance, no one can feel cold in a warm colour zone, and vice versa in the cold colour zone, it is our a nature how we psychological response to colour.

Even though, there is no such kind of strong evocative colour medium at Knutpunkten spatiality but its colour properties by itself has its own symbolical meaning and psychological impact on the observers. The visual appearance of this building has two facts that visually no one can deny. At the first, because of its properties of colour, light and form, this building has brought a modern architecture view for Helsingborg; at list for the surrounding of the central since there are sequences of buildings which they are refers to a bit of as earlier architecture period. This is what I should amplify the positive aspect of the contribution of those elements in order to signify a modernism architecture touch for the surrounding aesthetic scheme. By itself, this contribution is not bringing a simple phenomenon, it brings the very important thing that the Variation which is essential for one city in order to make aesthetically beautiful city with different colour and forms. For sure such Variety is helpful in order to break redundancy environmental scheme with regard to preventing the observers from being bored feeling which could comes from the similar sequences of architectural space.

Variety is always advisable in many things; particularly on sighting, biologically seeing the same thing for a long time is not an inherently pleasurable phenomenon. This character of human beings makes us always waiting and looking for new things in every condition. However, when I come to the usage of light and colour on architecture, unfortunately in this culture the usage of those elements are a kind of using them as permanent. That is the fact that what most buildings are telling us their everlasting visual performance. The architecture form is not expecting that much to change its nature with regards to making Variety; it is not that much of a powerful element shaking the observer's attention as other elements do. There are many strange deconstructive buildings which are unusual experiences for the observers, but people are enjoying those buildings form.

For instance, I can raise the Oslo opera house as an example. This recent, completed in 2007, deconstructive building is a kind of place to entertain, ride bike on it, walk on it and so on. If the people who are doing that there are consciously looking at the sharpness and angular forms of that this building has, they would not dare to do those kind activities on this building. Moreover, those forms are not capable of giving a sense as they look; I believe this is happening because of its colour property those forms have lost their powerful symbolical message and meaning. In short, for instance, the sharp form of the angels looks unsharpened.

Therefore, the usage of colour on architecture must be consciously considered when it is applied since even financially it is too high cost to repaint it, and there is no habit of changing colour culture so often on architecture trend. At Knutpunkten the appearance of its colour spatial is very important for this building looks in order to attract or invite people to go there with regard to use the transportation activities, have fun there, and spend time over there and so on as a center point for those activities without any negative interference of colour impact. Colour has a power to shape this spatial in order to the users to forget or not to consciously whatever uncomfortable form it has. The outer part of this building colour spatial is engaging with the environment aesthetics. So that its colour and light appearance to touch the observers' psychological and physiological state is not powerful since the observer responds or perceives it indirectly.

However, inside Knutpunkten those elements are getting those evocativeness and powerful potential here. As my observation during this study, those elements are playing their role in terms of forming the surrounding spatial. This spatial whatever it looks like has potentials to effect the inner environment and the psychological and physiological status of the societies as well. This place needs some change for the better spatial. There are teleologically quite varying places inside this building; there is no calculation that all those places should be painted the same colour and saturation. They have to get their own colour expression which can help the places in order to make psychologically friendly atmosphere or place with the people who are using those places. The light elements also have to support this place in order to create a visually suitable place for the users. Particularly the underground tub should be considered again since putting artificial light is not that much costing. By means of sufficient light there is a possibility to prevent the user's psychological status from

psychosomatic problem which could come from darkness spatial of this underground tub. As we know there is a light treatment in Sweden in order to recover the shortage of light during the long dark winter period. As this treatment helps people clinically way, this is practically applicable for this place in order to resolve the disorder because of lack of light. To sum up, the appearance of colour and light element at Knutpunkten are contributing to its space, a spatiality to which we the observers respond we are stimulated and perceive it on our own way.

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## Illustrations



Figure four, Monotonous spatial of the surrounding, taken by Zekiros Melesse, Helsingborg, 2009.



Figure five, Fatigue effect at Knutpunkten bus station, picture taken by Zekiros Melesse, 2010.



Figure six, the appearance of colour and light elements at Shepherd's Bush Station At London, taken by Zekiros Melesse, 2010.



Figure seven, the passageway at Shepherd's Bush station at London, taken by Zekiros Melsse, 2010.