Emerging colours: new trends, demands and challenges in contemporary urban environments

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ABSTRACT

The concept of colour in urban settings has traditionally been associated with architectural colour palettes or urban colour planning. However, in contrast to the generally whitish or grey architectural environment, the use of saturated colours presented in dramatic ways has emerged as a trend in urban settings since the beginning of the 21st century. This study examines this globally occurring 'colourful' phenomenon and argues that emerging colours have distinct features, varying from design intentions to design impacts. Focusing on projects in urban public space, this paper positions the phenomenon in the contemporary urban context and attempts to explain the conditions and driving forces behind it. By exploring the use of saturated colours in a context, we argue that colour has been engaged as an active design element to respond to the demands and challenges of contemporary urban environments. Furthermore, new demands can be observed that accelerate the spread of the use of emerging colours globally. We suggest that it is time for a critical review and evaluation of the phenomenon as part of understanding contemporary urban and landscape design culture. Such an understanding will allow us to have updated references for environmental colour design in contemporary urban contexts, and to use colour effectively.

KEYWORDS Saturated Colour, Environmental Colour Design, Contemporary Urban Environment

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1. Introduction

Colour has always been a controversial aspect within the history of architecture in Western culture. With prejudices about colour and uncertainty when using colour in architectural design, the general image of built environments has been whitish or grey (although there are notable exceptions), especially since the advent of the Modernist era in architecture (Batchelor 2000:21-48). However, since the beginning of the 21st century, more colourful expressions have emerged in urban environments. Unlike the conservative colour palettes in traditional environmental design, such as colours inherent in materials or prevalent neutral tones, the 'new' colours are vivid and bright and easily stand out from their surroundings. Apart from the use of colour on architectural façades, these emerging colours have also spread to urban environments through forms of street art, temporary installations, and urban and landscape design.

Aware of the inspiring ways colour is being used, some studies have explored these 'new' colours in urban environments from different perspectives. For example, Borsotti (2019) focuses on the use of strong colours in contemporary architecture with the intention of chromatic interventions and argues that colour serves different functions and should be considered as an integral part of architectural design. Boeri (2017) considers colour in association with different components of the urban environment and proposes to understand colour from the perspective of placemaking (transforming spaces into living places), which can play a role in city transformation and urban colour planning. Despite these differences in focus, researchers acknowledge the changing role of colour and emphasise the need to look into the function of 'new' colours in urban environments.

To investigate how the 'new' colours interact with contemporary urban contexts from a design perspective, we focus on an assessment of design projects in urban public space, in which the outcome of the colour design is a collective decision and responds to specific demands. Therefore, in this paper, the phrase 'emerging colours' mainly refers to the growing number of urban and landscape design projects in urban public space characterised by saturated colours that are distinct from and sharply contrast with their surroundings. Through the comparison between examples of the new phenomenon and traditional environmental colour use, notable differences and tendencies of colour design in contemporary urban environments can be identified.

2. Colour design as a new phenomenon

In this paper we identify and present three main aspects to illustrate the features and trends of the emerging colours in urban public space. New phenomena and design decisions about the use of colour can be considered to be a result of constant interactions within contemporary urban settings.

2.1. The role and functions of colour

Architectural colour design and urban colour planning are the two major branches of traditional environmental colour design in urban contexts, which have been profoundly influenced by the historical perspectives on colour in architecture. In architectural discourses, colour has been deemed secondary to form (Braham 2002) and a less important element of visual design which mainly serves decorative purposes (Caivano 2006). For many architects, colour is an intractable element that should be carefully controlled, while 'safe' colour palettes are generally preferred (McLachlan et al. 2015). Researchers and practitioners have both looked for the principles of integrating colour into the environment to create harmony, which in many cases, means that colour is an unobtrusive element in the design. Nevertheless, in nature, a wide range of colours can coexist, and different colour combinations are considered as an intrinsic and regional feature, which gives character to landscapes (Bell 2019). Although the potential and function of colour in environments has been revealed in many studies (e.g., Lenclos and Lenclos 2004; Swirnoff 2000; Mahnke 1996), the role of colour generally remains ambiguous in many architectural practices compared to other design elements such as form, scale and shape.

Nevertheless, instead of being used submissively, the role of colour has been redefined in the emerging phenomenon in which colour has been used as an effective tool to achieve specific design intentions. Since the 1960s fresh views and open attitudes towards bold and saturated colours have been introduced to the public through numerous art and design movements. The general acceptance and greater freedom of using colour have inspired more colourful expressions in urban environments. With the recognition of the potential and effects of colour, designers have begun to endow it with specific roles and functions in urban public space over the last few decades. Learning from previous movements, such as Supergraphics during the 1960s, saturated colours have been increasingly used in urban environments for different occasions due to their ability to attract attention, communicate visually and provide instant changes. The 1984 Summer Olympics in Los Angeles is a good example to show how vivid colours on a large scale interact with urban settings. As an instant and inexpensive

approach, colourful installations transformed the entire city into a venue for the celebration, while bright colours were also embedded in signage designs for wayfinding (Jerde 2019).

Since the 2000s, more urban and landscape design projects started to involve saturated colours in ordinary situations, while the budget is no longer the determinant for selecting bright colours. Examples can be found in many urban interventions such as Superkilen Park (2012) in Copenhagen, Pink Street (2011) in Lisbon, and Garscube Landscape Link (2010) in Glasgow, where vibrant colours were introduced to raise attention and claim the renewal of the places. The distinct colour features transformed monotonous sites from being a 'nowhere' into places with a new identity. Bright colour palettes applied at large scale are believed to have positive psychological effects (McMorrough 2007), which assist the process of urban intervention to generate a better ambience.

In other design practices, colours have been selected not only for their attractive appearance but also for their capacity to build connections and associations, which allows colour to serve different intentions simultaneously. Colour has always been applied as a powerful tool for visual communication and to increase publicity. Like the famous case, Coca-Cola red, colour has been widely used to represent a brand or a product in advertisements. In the new phenomenon, these functions of colour have been introduced to the field of urban and landscape design to serve design intentions.

A key example of this branding role of colour is the fourth edition of Pigalle Basketball Court (2017) in Paris,

delivered right after the announcement of the new 2017 Nike and Pigalle fashion collection, which refers to the colour palette from the fashion collection (Fig. 1). Dramatic hues have been applied to this urban space in an attempt to define a new dynamic sports environment for the local community, while at the same time carrying out the function of promotion.

The popularity of this colourful court on the web and in a real place increases the publicity for the fashion collection that shares similar hues. The colour palette creates connections between fashion products and urban public space and plays a definitive role in attracting attention and branding.

The associations between colour and contemporary cultural icons make particular colours or colour combinations a powerful tool for communicating and publicizing ideas in urban environments. The art installation, Pink Balls, became a landmark during the annual celebration in the Gay Village of Montreal (2011-2016). Over a hundred thousand pink balls suspended above the street created a stage for people to enjoy and celebrate their culture. Inspired by the rainbow flag of the LGBTQI community, the colour pink has been upgraded to six hues from the rainbow spectrum in the latest version (Cormier 2017–2019). The bright hues create an atmosphere of celebration while the symbolism of colour in this given context expresses the intention of supporting the diversity in society. The vibrant colours with embedded meanings not only appeal to groups who share the same culture but also general audiences who enjoy the colourful scene.



Fig. 1. Pigalle Basketball Court, 2017 (left). Photo © Beichen Yu. A selection of images from the search result of 'Pigalle Nike 2017' (right).

The above-mentioned examples show that the design of colour responds to contemporary urban settings directly, and saturated colours are selected intentionally to provide solutions for specific situations. Instead of being an inconspicuous element in the built environment, the new colour scheme often creates a distinct contrast to the original colour palette in order to facilitate instant changes and new functions within the space. In this emerging phenomenon, the decision of colour is no longer limited by the framework for colour design in architecture and urban colour planning but is open to a broader range of options based on a better understanding of the role and function of colour in urban public space.

2.2. The participants of colour design

In traditional environmental colour design, architects and professionals from relevant backgrounds are in charge of colour decisions, and in general, they tend to prefer neutral colours and 'safe' colour palettes despite the significant changes in architectural styles (McLachlan et al. 2015). Doherty (2011) argues that not many opinions on the use of colour are heard from urbanists and that artists appear to be more comfortable with colour than urbanists. It is unfair to assume that most architects are less familiar with chromatic expressions compared to designers or artists despite the fact that they receive more colour training during their education than architectural students (McLachlan 2013). However, it is notable that professionals from different disciplines may have different ideas and expertise in using colour. Over the last two decades, creative groups from diverse backgrounds have begun to express their opinions about colour in urban environments. The increasing number of interdisciplinary collaborations in urban and landscape design and the popularity of public art encourage the appearance of new colour expressions. The saturated colour palettes that have usually been used in interior design, graphic design, fashion and art have been introduced to the urban realm. which blurs the boundary between urban environmental colour design and colour design of other disciplines.



Fig. 2. Yellow is the core identity colour of Southbank Centre's complex, 2019 (Photo © Beichen Yu).

Designers from other creative backgrounds have brought their principles and strategies to colour design in urban environments. The entrances and staircases of the Southbank Centre in London were coloured bright yellow as part of the rebrand project of 2017 (Fig. 2). Also appearing on posters, billboards and a website, together with the typography, the bright yellow has been introduced as the core identity colour of the new brand (North 2017). The strategy of using distinct and coherent colour in visual identity design has been applied to public space, which makes it stand out as an integral part of branding.

With the popularity of large-scale installations, artists have made the urban public space a stage to exhibit their use of colour. Artists such as Carlos Cruz-Diez, Morag Myerscough and Felice Varini mark the urban landscapes with their signature colour palettes. Besides expanding the range of colour choices, designers and artists also introduce their frequently associated materials and skills into the urban environment to generate different colour effects. Thus, media such as acrylic paint, PVC and fabrics allow the colours to be presented in various forms and locations rather than being restricted to architectural façades. Since colour design can be carried out by different disciplines, corresponding reference systems should be built to evaluate the emerging colours in urban environments.

2.3. The target groups

Jean-Philippe Lenclos explored the associations between regional colour palettes and local identities with his concept of 'The Geography of Colour' (Lenclos and Lenclos 2004). Colour has long been used as a way to express cultural identity and to maintain a sense of place within community in vernacular architectural а environments. Lenclos' studies imply that the communities that created colour expressions in their environments were often the potential audiences (the target group). Since the 1960s, studies on environmental colour design have explored the relationship between architectural colours and elements including space, form, structure, light and function (e.g., McLachlan et al. 2015, Nemcsics 1993), principles for urban colour planning (e.g., Brino 2009; Spillmann 2009) and environmental colour design in a contemporary context (e.g., Lenclos 2009, Porter and Mikellides 2009). However, with respect to colour preferences in practice, traditional environmental colour design, especially in the urban context, usually considers the general public to be an audience rather than a codesigner.

However, in many recent cases, colour design is tailored to the preferences and identity of specific groups. For example, when introducing trendy elements from popular culture among young people, sports courts around the world, such as basketball courts and skate parks, have been cost-effectively renovated using dramatic colour schemes, which seem to be welcomed by young people. The colourful environments also accommodate and encourage other popular activities among the younger generations, such as taking selfies and making YouTube videos.

Road crossings and pathways may engage eye-catching colours as a reminder for both motorists and pedestrians of road safety. Bright colours are designed to raise attention when travelling through traffic and work as a signage for wayfinding. In contrast to the grey traffic roads, the applied vibrant colours help to claim the territory for pedestrians and cyclists in car-dominated cities (Fig. 3).

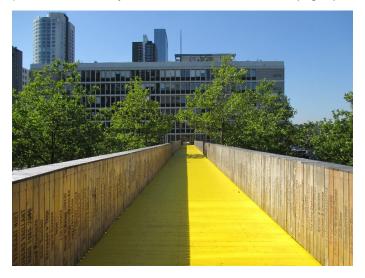


Fig. 3. The pedestrian bridge Luchtsingel in Rotterdam, 2015 (Photo © *Nanda Sluijsmans/Wikimedia Commons).*

Exaggerated colour expressions can also be used to attract tourists who are looking for photogenic scenes. The increasing flows of visitors can invigorate an area by bringing more opportunities to local business and improving public safety based on Jane Jacobs' 'eyes on street' theory (1961). Last but not least, these emerging colours in urban public spaces interact intensively with current Internet culture. Besides the actual users of the physical space, the aim of attracting the attention of potential online audiences is embedded in the colour design with the function of branding and promotion.

Eye-catching colours or colour palettes are selected in urban design to create an 'Instagrammable' scene that helps to promote the spread of images on social media. Bright colours create a strong and recognizable identity to a place in no time and new hashtags for people to communicate online. The fast spread of the colourful images on social media, in turn, attracts people to visit the place. Moreover, the popularity of certain colours or colour combinations online also influences the decisions about colour in design projects. By responding to the online colour trends, pink, red and rainbow colours can be seen around the world in urban design projects despite their different geographical locations and other regional factors.

3. Reasons behind the emerging colours in urban environments

Based on the discussions above, we suggest that there are four main reasons behind the increase of colourful places in urban environments in the 2000s.

3.1 Preconditions for the emerging colours

First, above all, the improvements in technology for colour application provides the conditions for more varied colour expressions in outdoor environments. The availability of pigments and coloured materials that are resistant to water and weathering, as well as to wear and tear by feet, enables the colour application to meet the design requirements. A wide range of materials available in different colour options gives designers the freedom to experiment with the performance of colour in a given urban space.

Second, the widespread love of saturated colours which has grown since the 1960s has been reinforced by the current Internet Culture during the 2000s. Both general audiences and designers seem to have more positive attitudes towards having brighter and more vivid colours in urban environments. With the increasing participation of artists and designers from different backgrounds in environmental colour design, fresh perspectives of colour and new colour palettes have been introduced to urban public spaces.

3.2. Demands of the emerging colours

The two reasons mentioned above are the preconditions for this phenomenon, while one of the driving forces behind the emerging colours is that, when used strategically, colour can meet different demands in contemporary urban environments. Public spaces always play a significant role in the social and economic life in the city. Gehl and Gemzøe (2001:10) further explain the traditional functions of urban public space and state that "public space has always served as a meeting place, marketplace and traffic space." However, in contemporary urban contexts, public spaces are endowed with more sophisticated roles and are expected to respond instantly to different requirements.

Unlike the traditional public spaces which have specific functions and fixed property, many urban public spaces nowadays are required to accommodate various activities such as pop up events, art exhibitions or commercial promotions at one or different times. As a design element, colour can transform a place in a short time and provide a new identity for the corresponding role of the urban public space. Moreover, with the rapid growth of modern cities, more undefined or underutilised spaces are appearing in urban environments. In many modern cities, places such as roundabouts, underpasses, parking lots and utilitarian paths can often be undesirable or even unpleasant for urban residents. Irrespective of the existing conditions, the application of vibrant colours can bring positive changes and a new image to urban voids by generating new attractions, activities and psychological comfort. Besides being applied in urban intervention projects, saturated colours also emerge in contemporary urban environments because of their capacity to facilitate visual communication. Many urban design projects use striking colours in branding, wayfinding and publicising ideas in public spaces where the exchange of information is becoming more frequent and more intense.

Last but not least, as discussed in the preceding section, another noteworthy reason behind the rapid growth of the phenomenon is the rising influence of Internet Culture since the 2000s. Saturated colours in urban public spaces meet the enormous upsurge in demand for photogenic scenes on social media. Due to instant broadcasting online, the popularity of colourful scenes inspires and encourages similar cases to be created worldwide. Being aware of the positive influence and potential impact, more and more designers have begun to include colours which are popular in social media in their designs to reproduce that success in different locations. The preferences and demands of saturated colours in Internet Culture, in a way, promotes the widespread presence of saturated colours in contemporary urban public spaces.

4. Concerns and discussions

Despite the positive changes brought about by increasing colour expression in our cities, there are a few concerns that we wish to address regarding this emerging phenomenon. With the development of pigments, the application of colour has been used as a fast and cheap method to provide immediate changes in current practices. A wide range of bright colours has been used on building façades in slums or declining regions such as Santa Marta in Brazil (Flecha et al. 2017) and panel buildings in Tirana, Albania (Guaralda 2009) to provide quick improvements to existing environments. Although the selection of colours and the way to present colour is more precise with the consideration of specific design intentions in urban and landscape design, there are other potential impacts on urban environments that can result from this upsurge in saturated colours.

As mentioned above, with the influence of the Internet, projects with distinct colour features are likely to attract more audiences and become known to people around the world. Aware of the benefits of using saturated colours, especially colours trending online, similar colour expressions tend to be reproduced in different locations, regardless of the context. In some situations, colour design has become a trademark of the designer or the project while alienating it from the local context (e.g., The Umbrella Sky Project 2012-2019). 'Successful' colour palettes or approaches to colour design are produced as a tool kit that can be applied to anywhere in need of a new stimulus. Homogenised colour expressions can mask the sophisticated details in the original environments and hide or suppress regional identity, which may reduce the connections between the place and local culture.

Another concern is the impact of the emerging phenomenon on the daily lives of local communities. With the specific intention of attracting tourists and broad online promotion, a place with attractive colour features can suddenly become a new landmark and a must-visit place for photo shooting. The over-popularity of the site may contribute to the potential issue of mass tourism that has been frequently discussed in recent years. Amsterdam City Council in the Netherlands removed the famous 'I amsterdam' letters from outside the Rijksmuseum in order to reduce the tourist overload and call for more attention to the place instead of using it merely as a selfie background (Hitti 2018) (Fig. 4).



Fig. 4. The 'I amsterdam' letters attract tourists who take pictures and selfies, 2016 (Photo © Tobias Niepel/Wikimedia Commons).

A massive influx of tourists is not only harmful to the authenticity of the place but also creates conflicts of interest between local communities and visitors. As a successful icon of the media branding campaign, the Pink Street in Lisbon is considered to be a strategy to promote a tourist-oriented nightlife spot and bring income to the city (Nofre et al. 2018). However, the increasing popularity of the site among tourists and the lack of regulations have already caused negative social and spatial impacts on neighbours and their liveability, especially at night (Nofre et al. 2018). Therefore, we suggest that designers should consider the local context and have a better overview of sustainable development and potential negative impacts when introducing distinct and appealing colour features to urban public spaces. Conversely, the application of colour can be used strategically to divert the flow of tourists to lesser-known places, and the negative influences on residential areas and overloaded attractions can be limited by controlling the timespan of the project.

5. Conclusions

By investigating colour design in contemporary urban environments, our study identified a design phenomenon characterised by the use of saturated colours in urban public spaces. Since the beginning of the new millennium, more vibrant colour expressions are increasingly appearing in many cities around the world. Compared to the traditional environmental colour design, colour has been used as an active design element to respond to new challenges and demands in urban public spaces.

Although we can catch a glimpse of the importance and the potential of the phenomenon by observing and summarising current examples, many crucial issues remain unclear. Studies are required to help us better understand this phenomenon by exploring the relationship between the 'emerging colours' and traditional environmental colour design, its impact on social and economic lives, and the guidelines for the application of saturated colours in urban environments. Hence, we suggest that systematic research on the phenomenon is necessary to clarify the functions and the impact of the 'new' colours, which will provide references for understanding and evaluating the phenomenon as part of contemporary urban and landscape design.

6. Conflict of interest declaration

The authors state that no actual or potential conflict of interest exists including financial, personal or other relationships with other people or organizations within the three years prior to beginning the submitted work that could inappropriately influence, or be perceived to influence, their work.

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