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Interactive and Media Architecture – From Social Encounters to City Planning Strategies

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Abstract

The paper searches into the potential of media and interactive projects to support participation and generate social encounters in public spaces. Moreover, it proposes implementation of media and interactive projects into city planning processes. On the basis of theoretical approaches, case studies and interdisciplinary surveys the paper gives insight how interactive and media architecture can engage people in activities in urban spaces on many levels. It focuses on the art installations that with support of new technologies involve people to become co-creators of the art object, both directly in particular place of the city, as well as remotely, by means of mobile devices or internet. The impact of such participation may affect not only a clearly delimited place, but can be used to create connecting paths or change the perception and identity of the whole areas. The fundamental objectives of city planning programs are closely related – the goal of many urban renewal strategies is to establish creative connections between dispersed fragments of the city and stimulate the presence of people on the streets. This convergence of goals allows to perceive new interactive and media technologies as a new architectural tool that could be incorporated into the city planning processes. Indeed, interactive and media architecture conceived as temporary 'micro-interventions' can take a role of pilot projects to change the image of places intended for future transformation or applied for site-data analysis and collecting opinions making the whole process more creative and participatory. However, there is still a need for developing procedures allowing for more effective integration of media and interactive projects with the urban planning operational schemes.

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1. Introduction

Lively cities are inviting and provoking social interactions, therefore they are stimulating and enriching human experiences, on the contrary to the cities deprived from life [1]. Despite the fact that contemporary cities keep trying to be more and more attractive, in each city there are still spaces in need for an urban renovation. New interactive technologies and media architecture have a potential to engage people into activities in the city spaces on many levels, both directly in particular place in the city, as well as remotely, by using mobile devices and/or internet. The aim of these installations is to attract people and to engage them into a wide spectrum of activities, especially in the optional and social activities that occur in the public spaces, that are equally most wanted and most difficult to be activated [2]. Numerous examples of permanent projects, temporary interventions and prototype studies in the public spaces have shown, that new media art, in form of urban screens [3,4], interactive surfaces and installations [5] and responsive interventions engaging active participation [6] can stimulate various types of interactions [7] between people and the art form, as well as different social relations and Shared Encounters [8,9].

The impact of such participation may affect not only a clearly delimited place, but can be used to create connecting paths and change the perception and identity of the whole areas. The fundamental objectives of city planning programs are closely related – the goal of many urban strategies is to establish creative connections between dispersed fragments of the city and stimulate the presence of people on the streets. This convergence of goals indicates that new interactive and media technologies can become a new tool in the city planning processes. New questions arise however, over the methods and operational solutions of integrating new tools into traditional urban planning procedures.

While the traditional understating of urban planning as arranging compositions of built structures is still present, its objectives, tools and methods have changed considerably. Even financial constraints cause that the main goal of urban planning is not to design everything from the beginning to the end but to induce a process of change. Instead of re-arranging the whole urban areas, carefully designated interventions are selected that are supposed to become effective space activators – the method itself is often referred to as urban acupuncture. At the same time, operational procedures of urban planning become participatory to fit the expectations of democratic society and to ensure long-lasting sustainable effects. Noticeably, the most successful urban renewal processes are not focused on "sanitation" of spaces, namely on cleaning their alternative appearance, but organized around the discussion how to expose and preserve their unique values and steadily transform problems into assets. Consequently, new questions arise as how to stimulate inhabitants' collaboration, how to increase pride and satisfaction of living in a particular place or how to convince the others to visit yet undiscovered urban areas and enjoy their distinctive characteristics.

In effect, one can observe nowadays a whole range of newly emerging approaches that change the image of professional urban planning and render obsolete many traditional methods and procedures. There are many attempts to stimulate urban renewal through art, cultural events and temporary interventions. New guidelines how to revitalise a city are proposed, embedded in the concepts of Cultural Planning [10], Creative City [11], revitalization with art [12,13], 'Ground-Up City: Play as a Design Tool' [14], 'Temporary Use Projects for Urban Development' [15], and many others.

In this situation it is worthwhile to notice the convergence of objectives that urban planners share with media architects and artists. Actually, the goals are almost the same: to activate space, involve people, to create connections between dissipate urban areas, to unveil the peculiarity of places. Consequently, new questions emerge. Would it be beneficial to involve media and interactive projects in urban design procedures? What are the possible ways of integrating interactive and media technologies into architectural and urban renewal projects and how could media and interactive technologies contribute to urban processes making them more effective, creative or participatory?

2. Micro-scale interventions

To start with the small scale of impact, it is important to focus on the method of 'micro-interventions'. Very often the goal of these projects is to introduce new activities into the selected city areas. From the architectural point of view, micro-interventions are usually conceived as built structures but could equally be media or interactive

installations. Their objective is to attract people, to let them gather in a particular place of the city and enjoy the surrounding or a play, in which they have been involved.

As such 'micro-interventions' may even take a role of a pilot development projects. Because of their temporary character, relatively low cost and a potential to be both related to the particular place and inviting for the people, they could become a test-bed for future development. They can reflect the possibilities of activating the space and serve as a research tool in studying the characteristics of the flow of the people towards the intervention point. Moved from place to place they may function as pilot projects unveiling the strong points in the district, which could be important in the realization of the final renewal process. Additionally, even temporary installations may attract newcomers and thus stimulate the inflow of new assets to the designated city space [16]. Consequently, it could be noticed that the 'micro-interventions' seem to draw attention of new investors. Equally, the city authorities count more and more often on the cooperation with the 'pioneers from civil society' in stabilizing the situation of sociologically weak districts, revitalizing the forgotten spaces and creating new public spaces, and all of it with a very moderate financial effort [17].

Nevertheless, the micro-scale interventions are so far mostly individual 'on spot' projects, arranged independently by the art institutions, non-governmental organisations or city dwellers themselves. Quite often they also take form of temporary media art projections or interactive installations organized as open space exhibitions or within art festivals in the real city spaces. If correlated well with the city planning strategies, they could serve as a successful 'bottom-up' planning tools for revitalisation of the problematic or dysfunctional spaces in the city.

3. Influencing the perception of the space – creating new identity of the place

New media art and interactive installations can have a positive influence on the character and perception of the space. According to Juhani Pallasmaa [18], the evaluation of the character of the surrounding environment is a complex process engaging a range of senses. It is an overall effect of multiple factors, that combine in a moment into a general atmosphere, feeling, mood or climate of the space. Mirko Zardini [19] notices that together with a rediscovery of the 'character' of the space, that determines a specificity of the place concerning not only visual but multi-sensory impressions of that exact place, a 'sensory revolution' has begun in the context of architecture and urban planning. The non-visual quality of architecture and space is becoming a more and more important aspect of design for architects and urban planners, who search for solutions that improve this ephemeral and difficult to define or describe attribute of space. In fact, the research of the authors of this papers already shows, that media technologies and interactive art installations can influence human sensory perception and can create multi-sensory experiences in the city spaces [20]. As such new technologies could actually be incorporated into the projects that improve the multi-sensory perception of space and architecture.

What is more, the responsive landscapes and interactive installations by engaging the audience into social and artistic activities may build up new memories of urban spaces, which "assume a value that is both immeasurable and vital" [21]. Such newly acquired memories can be related with the past events and histories, creating something that would be called 'nostalgic memory' [22]. What is even more important, such new impressions and memories may effectively change the perception of particular urban spaces. They are stronger when supported by sensory attachment or by movement and presence of other people, as well as by special, unusual or surprising events and activities, that people can witness in the space, or even participate in. It appears that even temporary projects can have a long-term influence on the perception of the space and thus could be applied in order to change the image of places intended for future transformation.

Actually, the range of urban interactive and media installations is noticeably expanding. According to Ewa Rewers [22] city art, that consists of "not only the art of architecture, small spatial forms, sculpture street art, site specific art, and community art, [… but also] video art, installations, spectacles", has developed "into the most popular and most often invoked practices of animating public spaces". In effect, as Barbara Lewicka [23] notices, the postmodern cities are filled with culture, that is accessible for everyone in the streets and city spaces in the form of art projects. It concerns also new interactive art projects, distinguished by Suzanne Lacy [24] as 'new genre public art', that is based on the public engagement.

The project 'Oil silo 468' designed by Tecné Collective together with Lighting Design is a good example how artistic intervention may create new vivid urban memories. The 'Oil silo 468' is an industrial construction located in Kruunuvuorenranta district of Helsinki that has been changed by a permanent light artwork and became a successful civic centre. It was a winning project selected in the competition organized by the City of Helsinki to promote the urban development through design. "The enduring fascination of the complex movement of light and the amazing location by the sea will make this a captivating experience for the visitors and the residents of Helsinki", Tapio Rosenius the Director of LDC says [25]. This art installation project, not only visited by a great number of people living in the city, but also visible from the city, creates a positive experience of the place and gives a new meaning to the area under transformation, explains Victor Soria, representative of the design team, while being awarded with the price for the best Spatial Media Art project at Media Architecture Biennale in Aarhus in 2012 [26]. This light art intervention launches a large urban redevelopment project with the aim to transform the area in into a modern residential zone and an attractive recreational space in the future district of Helsinki.

4. Supporting remote participation, information exchange and bottom-up processes

There is a noticeable group of interactive installations and media facades that involve remote participation, namely, where participants interact with one another and the installation itself with the support of social media, mobile devices and via Internet. While remote contact will presumably never prevail over the close one, sometimes it is the only available at the moment. Moreover, the tension between the virtual and real, between the technologically based input and its effects visible in the tangible environment of the city appears to be a very attractive concept. The very idea of a remote influence on urban reality is appealing to the potential participants enticing them to undertake the action. As a result, any forms of text, visual compositions or even ad-hoc designs expressed far away and send through the transmitting system may find their final presentation in the landscape of the city. Although the primary input participation is not directly related to the experience of being together with other people, the final effect may give impression of being a part of a wider community. Besides, this distant input may stimulate personal involvement of pedestrians and observers gathered in the immediate surroundings of the street installation. In this two-fold manner the real-time remote interaction discloses its power to activate public space, enhance its identification and create social encounters both close ones and distant – via an urban display.

There are numerous successful projects that let the participants express their feelings and thoughts, and in this way influence the visual landscape of the city. Depending on the profile of the project, the interventions of "players" may be presented in forms of drawings, words and even whole sentences, or collected as information to the art mapping projects. The initial input data is usually sent by participants in form of text or media messages, and in most cases arranged according to the artist's concept before being presented. The subject of this remote discussion depends more often on the idea of the media artist but it may as well be inspired by the particular situation. In any case, participants' opinions, thoughts or even emotions, re-organized to fit the artistic concept become visible on the urban installations. For the D-tower project, realized in Doetinchen by the Dutch group NOX, special programs were developed to transform the information about citizen's emotions into colours of light appearing on the sculptural form of the pavilion located in the city space.

Another good example of the remote participation is the Internet Kunstfassade project developed in Munich by Serviceplan Group for innovative communication. In this case people are encouraged to design on their personal computers works of art composed of different arrangements of colours, their intensities and transitions. Sequences of pre-designed compositions are displayed one after another on the building's facade. Since each personal presentation is time-restricted, the façade changes constantly giving an inspiring overview of the imagination of people involved in the project. The effect is visible both on the street level and all over the world via the Internet.

Observations reveal that installations supplied with the distant data, seem to be powerful in a different way than the works with direct input-output interactive systems located on the streets, but they still could induce social participation. They have an impact on the real urban spaces, both change their visual image and stimulate social relations. "Many projects confirm the great value of projects based on spatial data visualization, sensory mapping or remote participation, and prove that they could be an effective information exchange medium between the citizens, city

officials and artists" [27]. Moreover, its effects can be more intellectual and reflective. Staying away from the direct location, thus extending the area of interplay allows for more careful consideration why to play and what to change. In the sequence of reciprocal actions and reactions participants exert their influence on the reality. Expressing their opinions, they activate space. Additionally, observing and reacting to the immediate effects of their interventions participants become engaged in steering these changes. Artists involve citizens in this game, and give them inspiring stimuli for re-arranging the reality. As Liliana Bounegru [28] points out: "Motivated by a quasi-Situationist critique of urban space, they aim to reconfigure public contexts by offering its inhabitants a tool to re-appropriate it".

The emergence of the remote participation is an important issue in contemporary debate on media art and architecture and their role of re-defining public space. Scott McQuire [29], the interdisciplinary researcher involved for many years in exploring the social effects of media technologies, believes that "new forms of public interaction clearly have the potential to transform existing configurations of power defining the uses and ambience of public space". McQuire [29] suggests that "the experimental practices of contemporary media art can offer a useful test-bed for exploring the critical potential of relational space – the demand to actively construct social relations to others across heterogeneous spatio-temporal regimes – by promoting new forms of public agency".

Furthermore, the participatory architecture and installations could be used to allow the city dwellers to be a part of the creation and transformation process. Involved in this process, they influence the directions of the city renewal and support the city authorities and urban planners with suggestions and conclusions coming from experiences gained in real urban space and not from studies of the maps and reports. The pervasive mobile devices and internet could engage people not only in colouring the facades and texting their ideas that would be displayed for a short time, but correlated with the city planners they could be used as a real tool to support the participatory city development. It could be applied for site-data analysis and collecting the opinions of the people on the substantial matters. It could be used both in the preparatory processes to analyse the area, its perception, strengths and weaknesses, people's needs and proposals, as well as serve as a kind of questionnaire to collect the opinions on suggested renewal plans prepared by urban offices. Because of the attractive, but at the same time understandable and adaptive form of the interactive artworks, they could be inspiring and effective in involving people in the city planning processes.

5. Revitalization by art, culture and new media interventions – case study Gdansk

Research studies employed on urban spaces of Gdansk show the potential of the art-based methods in city renewal processes [30]. It appears that 'micro-interventions' could create a noticeable impulse towards the transformations of designated city areas. Moreover, a proper and coordinated art-location planning could create the whole chain of activated spaces, resulting in the united net of revitalized areas. At the same time creating connecting paths between fragmented public spaces is one of a key tasks defined by urban planners [31]. Continuity of paths linking different parts of the city and enabling a walk through urban landscape that will be inspiring, kinaesthetic and haptic emerges as a key objective even in formal municipal documents depicting planning strategies [32]. This convergence of goals allows to perceive new interactive and media technologies as a new architectural tool that could be incorporated into the city planning processes.

Several initiatives launched in Gdansk confirm the interrelation between art projects and urban strategies. Two parts of the city could be considered as important laboratories in this context: The Lower City district and the post-shipyard areas. The Lower City is a historical district of Gdansk that became isolated from the main system of public spaces by a cutting perimeter road. Since that time the Lower City suffered from a gradual decline and soon became identified with the dilapidated built structure, weak transportation system, social problems and high rate of unemployment. These and other problems have determined the status of the district as unattractive for investments and tourism [33]. Since the 1990s the situation started to improve. Together with traditional renewal processes focused on the facades' renovation, roads' and pavements' surfaces restoration, modernisation of the infrastructure systems and greenery plantings, there are many programs and actions that are dedicated to the inhabitants as well to the city dwellers from outside the district, in order to influence their acceptance of the space and to break the unfavourable fame of the district.

One of the first artistic programs focused on urban renewal of the Lower City area was the Outdoor Gallery initiative defined and mastered by the Laźnia Contemporary Art Centre. The main concept was to place artistic works on the

streets and encourage city dwellers to visit this part of Gdansk. The winning entry in the first edition of the Outdoor Gallery was the work of Philip Rahm 'Jour Noir' (2006). This was a composition of lamps and black boxes. In Rahm's concept icy air was going to flow from the lamp domes and passers-by sitting on the bench interactive music installation would activate. Unfortunately, this project was not completed due to technical problems and its very high cost [34]. In frames of the next editions many interesting projects were realized in the Lower City public spaces, such as 'Amber Drops' by Fred Hatt and Daniel Schlaepfer or 'Staging Anonymous' by Dominik Lejman. Gradually, the synergy of artistic projects with official municipal strategies of urban renewal focused on that part of the city seems to bring about the most promising effects.

Another powerful artistic projects are taking place on the territories of the Young City, which are the post-shipyard areas. One of the most spectacular one was the Odys-SEAS project, an intriguing spectacle of Leszek Bzdyl and Robert Rumas carried out in September 2004. The project was a part of the SEAS programme run by Intercult Stockholm under artistic direction of Chris Torch in cooperation with the Baltic Sea Culture Centre. The participants of the Odys-SEAS project travelled on a boat that took them from a central boulevard of the historic city to post-shipyard areas. In the scenery of usually inaccessible streets from the nineteenth century imperial shipyard and ruined interiors of the production halls the travel went on. The participants were reconstructing in a way Odysseus' journey and references to history and to destiny – both Ithaca and Gdansk Shipyard – were created by experimental choreography, media installations, illumination and different soundscapes. The walking tours revealed new territories of the city and new connections of public space absent in the general consciousness of city dwellers. They also highlighted sources of urban complexity and spatial, social and landscape diversity. Unfortunately, this unique artistic project was neither supported nor accompanied by urban renewal strategies, which weaken its potential.

Nevertheless, the results are encouraging and after the first pilot projects many others are launched by different cultural institutions. The City Culture Institute curators of the Narratives: Installations and Interventions in Public Space festival, organised in Gdansk annually since 2009. During the festival participants walk through the city that is supposed to be seen as a story written with landscapes of illuminated water, historical monuments and imaginative light structures forming fictional architecture. Although the Narratives project is located in different parts of Gdansk, the Lower City interventions are the most powerful one. With media and interactive installations embedded into imaginary paths, night walks are arranged that let the observers go beyond the limits of the daily perception of the district and reach new areas designated for renovation. By following the artistic interventions people explore the streets and different urban enclaves that are unpopular, problematic or intended for a future development. As they pass by they discover alternative ambiances and stories which give new meaning to the well-known spaces. With this change one may say that the urban renewal process has just started.

6. Conclusions

Research studies reveal the high potential of media and interactive projects to stimulate human involvement and induce activities in public spaces. They can initiate both direct and remote encounters, encourage inhabitants to take part in the discussion on urban space and participate in its rearrangements. These objectives become also important in urban planning strategies. In this context media and interactive projects may be recognized as a supporting tool in city renewal policies. They can take the role of pilot projects, reveal characteristics of particular places in which they are located, offer different channels for public participation contributing to the whole process by making it more democratic and creative.

Despite this fact, urban planning operational schemes still do not seem to be open enough for the expected collaboration. In the majority of analysed cases the initiative of partnership has been pioneered by cultural institutions – operators of media art and architecture projects, or universities based research groups focused on experiments with new technologies. The integration with urban planning offices was developed in each case individually and depended on many volatile factors. It means that an in-depth debate is required on how to adjust urban planning tools and procedures so they can grasp the advantage and benefits of media and interactive projects. Since urban planning operational schemes vary in different countries there is a need for complex comparative studies focused on effective synergies of media art, architecture and urban projects as mutually supporting tools for making better cities.

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