



II. URBAN SPACE AND VISUALITY IN THE ARCHITECTURAL WAY OF THINKING

RELATION BETWEEN CREATIVITY AND PLANNED REGULATION IN THE PROCESS OF SHAPING URBAN SKYLINE

Ivana Lukić

University of Belgrade, Department of Architecture,
University of Belgrade, Bulevar Kralja Aleksandra 73 / II, Serbia
E-mail: sandil@eunet.rs

The subject matter of this paper belongs to multidisciplinary field consisted primarily of urbanism and a part of it – urban design, as well as architecture and other fields, like aesthetics, psychology and economy, which supplement certain standpoints. Urban skyline of cities or large parts of the cities, as urban macro-images, are considered in relation to the nature of their origin – self-generated or being effect of the plan, through phenomenon of visual experience and application of new technologies on facades. The question is which ratio of creativity and planned regulation is optimal in the process of creating visually concurrent urban skylines. If planned solution of total macro-image is done well, the answer is: all regulations should be kept and creativity has no limits. In other cases, it is necessary to establish flexible scope of regulations, so that single elements of urban skyline could be realized in balance between limitations and desired result.

Keywords: creativity, urban skyline, regulation of urban skyline.

Introduction

Modern cities look alike. Global economy and technology impose standardization of life-styles, cultures of behaviour and forms. Appeal of cities manifests itself in their public space, which includes *public urban macro-images*, in other words, *urban skyline*. Observing urban skyline, a lot could be concluded about entire conditions of the city. Because of the blooming of visual communications branch and higher criteria of consumers of urban space, modern global tendencies and changes, high move-ability of people and various possibilities to realize travels, business, as well as private, the first meeting with a city, general impression about it, is what we remember and the reason why we come back and that mostly depends on urban skyline.

There are many ways to promote a city. Modern trends of branding various articles, among which is *branding the image of the city*, presented by urban skyline, enables us to find our place on global, visual map of the world on the basis of our rec-

ognizability and memorability. The image of city has become extremely important to attract investors, professionals and media attention. If skyline satisfies various visual criteria, in interaction with economical, social and political criteria, than its native population has something to be proud of. They, as well as tourists, use it to orient themselves and to use city easier. If skyline personifies urban environment with firm and clear characteristics, with elements of obvious identity, it is easier to understand it, to reveal its structure, symbols and meanings and to connect with it.

Subject matter of urban skyline, mostly *belongs to visual discourse of urban studies*, and that speaks for itself about necessity to analyze it more, concerning that until today *visual aspect of urban space* was neglected and underestimated – on the contrary to its importance. Power, value and relevance of spatial, physical, and visual approach should not be undermined by academic critics or by urban planning professionals, especially today, when visual aspects and aesthetics are very important to us in every aspect of life and useful as well. *The question in this paper is which ratio of creativity and planned regulation is optimal in the process of creating visually concurrent urban skyline, in other words, its affirmation and desirable shape.*

This subject matter belongs to *multidisciplinary field consisted primary of urbanism and a part of it – urban design, as well as, architecture* and other fields, like aesthetics, psychology and economy, which supplement certain standpoints. There is a number of scholarly papers about urban skyline. Some of them belong to commonly known, and it could even be said, classical. Wayne Attoe (Attoe 1981) wrote a book about urban skyline. In some other publications, there are sections dedicated to this wide field. During research of mental images of three American cities, Kevin Lynch (Lynch 1960) stresses the importance of distant views and panoramas which are, he claims, the main source of enjoyment in the city. Among five elements the image of a city is consisted of, in relation to urban skyline as a whole, he points out landmarks and edges. By interviewing users of urban spaces, he concluded that night skylines are more exciting than the daily ones, and, for that reason, more favourite. Edmund N. Bacon (Bacon 1995), through large number of reviews of urban skylines, emphasizes their importance in perception and experiencing the quality of urban form. He claims that skylines has been a dominant element in urban design for a long time and should be reconstituted as a major determinant in city building. Spiro Kostof (Kostof 1991) approaches skylines from historical point of view. A section from his text is about shape of skyline, its elements and design. Urban skyline is reviewed, too, trough different relations and contexts, for example, in relation to information theory and the laws of optics, in paper of Nikos A. Salingaros (Salingaros 1999). He does not mention skyline exactly, but principles of generating information field and usage of urban space, which are based on perception of surrounding vertical surfaces, nodes and paths, and that brings the subject of the paper in relation to vertical projection of urban form, that is, urban skyline. There are, also, empiric studies about aesthetical / visual preferences and connection with fractals. The most important, for the subject of this paper, are works which enlighten its relation to skyscrapers, from authors Donald McNeill (McNeill 2005) and Larry R. Ford (Ford 1992). In the context of regulation,

and more specific, height regulation and positioning of urban landmarks, there are papers of Samer Abu-Ghazalah (Abu-Ghazalah 2007) and John Zacharias (Zacharias 1999); for aesthetical / visual regulation Arthur Stamps III, Jack L. Nasar and Kazunori Hanyu (Stamps *et al.* 2005), also Tom Heath, Sandy G. Smith and Bill Lim (Heath *et al.* 2000).

The notion of creativity in the scope of subject matter of modern urban form and urban planning is present in popular works of authors such as Richard Florida (Florida 2002), Charles Landry and Franco Bianchini (Landry, Bianchini 1995), which emphasize the idea of “creative city”. “Creative city approach” has been often criticized, but in any case, creativity has become a major keyword in city planning and urban marketing policies around the world. “Creative urban concept, which has been proposed in the last two decades in order to achieve sustainability of the cities and to generate creative policies in cities, has gained importance on the global level” (Görgülü 2007-2: 81). Creativity and culture are often related within urban development strategies. In that sense, culture more and more becomes the business of cities (Zukin 1995), and cultural policy since the 1980’s became a response to the globalisation of capital. Relation between creativity and planned regulation in the process of shaping urban skyline is not covered by professional literature.

This study is based upon main methodological, dialectic, couples: analysis-synthesis and rational-empirical method. In combination with these basic scientific methods, there is auxiliary-descriptive method.

1. Basic title notions

1. 1. Creativity

There is large number of general definitions of creativity. It is thinking process to generate ideas which are innovative and functional, new notions, solutions of problems or new relations between existing ideas or notions. “New” could be partly or completely new. Creativity is also a creation of existing object with new characteristics, as well as imagining new possibilities which no one has thought out before, as well as performing something in a different manner and looking at something from a different, new, perspective which was not considered to be normal or possible. “That new something has some kind of value. What counts as “new” may be in reference to the individual creator, or to the society or domain within which the novelty occurs. What counts as “valuable” is similarly defined in a variety of ways. Theories of creativity have focused on a variety of aspects. The most dominant are usually identified as the four “Ps” – process, product, person and place” (*Wikipedia... 2011*).

All this sounds reasonable. However, it does not really help a planner who is struggling in his or her day-to-day work with legal regulations, financial rules and political and community sensitivities and considerations. Whenever he or she creates new plans or develops approaches to solve certain problems, he or she is soon reminded not to forget about the feasibility of the original idea. In this context, Klaus R. Kunzmann could be quoted: “Csikszentmihalyi’s definition of creativity is very

useful – Creativity is any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one. And his definition of a creative person is – someone whose thoughts or action change a domain, or establish a domain”. Here Kunzmann adds that “*being creative for a planner* means in addition that he or she occasionally has to be an urban or regional guerrilla to undermine established bureaucratic and political agenda” (Kunzmann 2004: 385).

In the simplest formulation of “creative city” the main idea is that capitalist development today has moved to a new distinctive phase, in which the driving force of the economy is not simply technological or organizational, but human. The “creative class” is a vague category, including basically those engaged in knowledge – intensive works, whose function is to “create meaningful new forms”, such as artists, scientists, analysts, business managers, opinion makers (Florida 2003: 8). They are today the “dominant class in the society” (Florida 2002: ix), which refers to the core of economic growth in developed countries. Such creative professionals want to live in quality, creative, tolerant and exciting places. Therefore, “a key question for urban planning refers to the possibility of promoting creative environments and ‘cool city’ images in order to attract these professionals” (Vanolo 2008: 370).

Tülin Görgülü writes that “Richard Florida talks about 3T in relation to the development of the creative capital: technology, talent and tolerance. For a place to attract creative people, to open a gateway for innovation and to reinforce the economic growth, these three factors should go hand in hand. Florida points out three features which are important in order for a city to has creative status: new ideas, an environment which have the facilities of a high technology and regional development and growth” (Görgülü 2007-2: 83).

We are living in the century of knowledge, technology and communication. High accessibility of information offers infinite choices to people, so that *creativity becomes the key word for competency*. Creativity is an important input in every aspect of our lives.

1. 2. Urban skyline

Using word “silhouette” *in urban context*, that is, *skyline or urban skyline*, in relation to objects on horizon, is from new days – not before 1876 and it became usual from 1890’s (Kostof 1991: 279). *Traditional meaning of urban skyline* is that is the line which separates earth from sky. Or “the line where earth and sky meet each other” (Kostof 1991: 279). It is created by combination of natural elements (trees, mountains, sea, etc.) and those made by humans (architecture). It is product of few civilizations and formed during number of years. That is why it differs from city to city. During long periods of time it was influenced by natural, geographical, historical, social, cultural, religious, technological and economical factors.

Today *urban skyline represents vertical plan (projection) of urban micro-form* of city, or larger city areas (in the sense of space). It could be said that it is *macro urban image* as well. *Skyline of spatial urban pattern (physical structure of city) is the expression of series of individual and predominant units which make primary form,*

in combination with morphology of ground and secondary spatial forms. Dominant objects (primary form) form basic “grid” of spatial expression of city. And opposite to them, secondary spatial forms, merge without standing out from the surface of skyline.

Germans used to call urban skyline “city portrait” or Stadtbild (Kostof 1991: 279). Also, the idea of using term “urban profile” for the purpose of expressing characteristic elements of urban skyline is not new. Artists for a long time single out noticeable structures on the line of horizon and convert them into impressionistic presentations of city’s physical form. Urban profile is more narrow term – the essence or sketch of vertical projection of urban form, than urban skyline, which is wider notion, which incorporates total picture, architecture, as well as topography, in other words, relation between architecture and place and its position.

Notions of (urban) skyline and (urban) panorama are often used in equal meaning even though there is difference between them. Urban skyline represents vertical plan (projection) of urban form, that is, its two dimensional presentation (2D). Panorama represents three dimensional presentations (3D) of urban form, watching it from an elevated point (3D). We can conclude from panorama what skyline look like, but skyline gives us more accurate information because of the better tone contrast of urban projection which is bordered with contour and sky above it, as well as of high definition of contour itself.

The main attribute of skyline is *instantaneous recognizability*, and it could be achieved only by *characteristic form* of observed object. *In the event of similarity, we must identify uniqueness.* Today, fast construction of uniformed city segments represents one of the ways of global initiation of city which has larger, international, ambitions. The secret logic of form is in repeating the same pattern (which was imposed by American skyscrapers and continued by business towers from 1960’s), like a guarantee and symbol of progress. Total urban image is the same, while particularities could be identified in details – treatment of public areas, traffic connections with other parts of the city, (none) achieved harmonization of different levels of perception or symbolically emphasized landmarks. Form of landmark often enables instantaneous recognition, which confirms earlier mentioned definition of basic attribute of skyline.

1. 3. Regulation of urban skyline

Urban skyline is main representative of visual identity of urban form. Urban regulations (on the level of planning or specific laws and regulations) which could impose visually concurrent macro image, that is, by urban regulations we could impact on its affirmation and desirable shape, could be summarized through four fields (Lukić 2010: 62–64):

– Aesthetic / visual regulation

The beginning of establishing of regulation draws back to the last century, it was suggested by Lynch who was one of the pioneers, he states that “it should be lead by “visual plan”: series of recommendations and regulations <...> all in concern of visual form in urban scale” (Stamps *et al.* 2005: 73).

Every city should have its own regulations about its urban skyline so that it could establish its character and coherency, in order to be *visually recognizable, attractive, and distinguished by visual quality*. *Visual value (quality)* of urban skyline is reflected in its ability to satisfy certain human needs, in this case, need for pleasantness, beauty and stimulation, needs for orientation and perception of space which are used for its better utilization. Visual value of urban space originates from specific, above all, space values which are realized by means of architecture and urbanism: *formal*, which depend on geometric forms of objects, its size, illumination; *artistic*, refers to those which take into account creation of architectural objects as artistic work / expression; *aesthetical*, which represents human aspiration for harmony, specific emotional mood, expressiveness of urban space and architectural form. For aesthetical quality “tough” professionals and those sociologically orientated claim that it is trivial subject of discussion. Nevertheless, there are strong evidences that “aesthetic attitudes are the most important when population of the city estimates the quality of the environment (Dornbusch & Gelb)” (Heath *et al.* 2000: 542);

– Height regulation

During history and today, there was not height regulation in some cities and in the cities where it existed; it could be strict or flexible. American cities are very heterogeneous about this. In Philadelphia, for a long period of time, no structure could be higher than statue of William Penn which is on the top of City Hall, 500 ft (~152 m) (Ford 1992: 181). In Washington D. C., Washington Monument is still higher then central part of the city. “Washington is the nation’s horizontal city, thanks to an unrepealed Act of 1910 which set the maximum building height at 130 feet (39.6 m)” (Kostof 1991: 312). If city authorities are serious about conserving central symbols, they have to pass the *laws and establish regulations*. Symbolic importance of the Capitol Building is greatly dependent on the visual prominence of the Capitol dome as a unique form on the city skyline so that no new development should extend above the base of the dome.

In America, there are few cities that lead in this – Madison, Wisconsin, etc. Other cities do not have any limitations – New York (see Fig. 1) and Chicago are the right examples. In these two cities business corporations energetically compete with each other to be visible in city skyline. When cities do not have consensus about city tower, everyone tends to build one.

In Europe, after WWII expansion of building skyscrapers has been accepted traumatically, contrary to America. Visual impact of the tall building on an American grid is quite different from the unpredictable impact within more complicated and older European urban pattern. In Denmark and Holland local authorities had the power to prevent the erection of tall buildings. For building of residential towers which appeared everywhere through Europe, was too late. In Germany, in most of its cities, only historic centre had evaded that destiny. Right next to it, the skyscrapers often make their stand (see Fig. 2);



Fig. 1. Skyline of New York



Fig. 2. Frankfurt – historical center right next to skyscrapers

– Regulation of view corridors (important vistas)

Skyline of the city could be perceived only by observing it from a long distance (long view) which incorporates larger part of the city and neglects details of space elements. Corridor of view depends on the type of approach, that is, it depends on the position of the standing point and field of vision. Traditionally, there are three types of

urban skyline views that mattered – from approach roads by land, waterfront views along a river or the seacoast and the views from high vantage points (natural viewing platforms) or from the summits of tall buildings. *Waterfront view gives vertical plan of urban form – urban skyline, as well as approach to the roads.* The angle of corridor of view is largest approaching through water and from high vantage points. “Land routes focus the city more intently. Composing desirable scene could be manipulated by the direction of roads. This practice of directing approach routes toward skyline features is persistent one” (Kostof 1991: 315).

This field of regulation concerns partly height regulation, too. The height of certain objects is limited to protect valuable views on natural beauties or valuable architectural works. For example, Denver, Montreal and Vancouver seriously limits the height of objects so that they could protect a view on mountains in background of their urban skyline. In Montreal and Vancouver, multiplication of standing points leads to identification of 18 and 26 protected views (Zacharias 1999: 217);

– Choosing locations for positioning urban landmarks

Locating skyscrapers and other attractive city landmarks spontaneously contributes to the poor image of urban skyline. *Their location must be carefully selected, it must be appropriate and justified.* Also, grouping and effects of combining should be carefully inspected. A tall building should suggest important location. Group of tall buildings should be attractive and located justifiably. In the opposite case, it happened that phenomenon of tall buildings is wrongly comprehended and consequently, even worse applied, which violets the appearance of urban space and could be observed on urban skyline. The studies state that it is important to define zones, districts, where skyscrapers could be built, and, also, they should be carefully located within those zones (preferably in the centre, edges, etc.) (see Fig. 3).



Fig. 3. Paris – skyscrapers of La Défense, carefully located within define district

2. Different relations in the process of shaping urban skyline

2. 1. Creativity and urban skyline

In this paper urban skyline in the function of macro image of a city is not taken into concern in a sense of general meaning and idea of a place, but as visual image, more exactly, from the visual point of view. It is important to construct positive and charming images, various and interesting as a fundamental tool for attracting global flows of tourism and investments to promote local development. Every city should define and promote its specific attributes and competitive advantages and to find the way to differ from other cities, that could be applied to urban skyline, too. Creativity is evaluated as one of the most important aspect of creation in the global world.

How to identify creativity on urban skyline or what is it that is creative in visual sense on urban skyline? There are many answers to that question, considering various aspects stated below:

– New (architectural) ideas

It is important that urban macro-image has its *landmarks with a big idea* “something unique, something extraordinary, something that will give them chance to be proud of and something to make it significant place in global itinerary <...>“ (Kostof 1991: 279). Landmarks can in that sense *improve visual identity* and put the city on memorable map of the world.

Highly developed environments today has clear need for more quality, more attractive and original design in every aspect of life. Quality of modelling is more and more important. By favouring city economy, tourism, needs for making strong local identity, appears the requirement for attractive objects and areas in the city which could be seen on urban skyline and become landmark which structure a city and gives it more attractive image.

New architectural ideas make *primary form of urban skyline* and model its *basic “grid”*. These ideas are incarnated in skyscrapers and other distinct volume – authentic forms or significant dimensions comparing to environment, but without tendency to grow in height. Competing in height of objects certainly brings global recognizability, but the same goal could be achieved by specific form, adding symbolic elements. Distinct form in relation to morphology of ground becomes element of visual identification.

Presence of cultural actors – like museums, theatres and concert halls, strongly impacts on character of urban fabric, in economical as well as in modelling sense. Incorporating them in city context add value to the content in their environment and land, gives new swing to the development of the city and opens new possibilities for empowering cultural economy. In that way, these specific accents, often became key points for recognizability of urban skyline, new places for gathering, also expressive scenography for modern spectacles and celebrations. Culture and spectacle became two key points around which are formed skeleton of new urban attractiveness;

– **New ideas about all-inclusive shape of urban skyline** – “any act, idea, or product that changes an existing domain, or that transforms an existing domain into a new one” (mentioned in section 1. 1).

Changes lead to urban skyline shape which is characterized by: *clarity* (by which city could be experienced and recognized – clarity of recognition; clear, arranged relations), *clear comprehension, readability* (with what form elements could be connected with certain places and events in time and space; integration of complexness, changeability and harmonization of all elements so that need for orienting, view, communication, identification could be satisfied), *recognizability, specialty* (so that shape of its total contour is specific, by which it could be impressed in mind of city users, and by which stronger visual identity could be achieved); harmonization of urban skyline by excluding exaggerated diversity; “all-inclusive shape is the most obvious when the diversity of the attributes of individual objects is low, when diversity is high – impression of all-inclusive shape is hard to detect” (Stamps *et al.* 2005: 76); “people estimate that simple (convex) skyline is too still, and they prefer skyline with multiple (sinusoid), in other words, convex-concave changes in shape”) (Stamps *et al.* 2005: 76);

– **New relations between existing and new elements of skyline**

Integration of old / inherited and new, in other words, urban environment that integrates inherited and does not support total reconstruction. This type of macro images integrate new values into the old and vice versa, and in that way create and promote new qualities. The key point is to maintain balance so that general character is not violated. But, “there are situations when old structures don’t satisfy modern requirements” (Tošković 2004: 9).

Creativity could be interpreted from *new relations between natural and artificial environment*. “Connection with nature adds new quality and returns the role of nature. Sustainable solutions create connections and flows of open and natural and open themselves to nature and connect with nature” (Bajić-Brković 2009: 49).

One of the more specific examples of new relations could be this: if people have different choices about the question of combination of shapes, colors and arrangements of objects on city skyline, they are also capable to make choices to include natural elements in combination with buildings. In that sense, sometimes, *a combination between buildings and natural environment is more important than visible natural environment*. Creativity lies in creating the “right” combination. These are hypothesis from some designer directives which were made to form picturesque urban skyline (Zacharias 1999: 219);

– **An environment which has the facilities of a high technology**

“The 21st century city skyline is a continuation to the 20th century skyline with more emphasis on high technology style of buildings” (Abu-Ghazalah 2007: 49) and that difference from skyline of earlier epochs is the characteristic of creativity.

New information technologies and their application on facades (*media architecture and digitalization, creating of urban sensation*) want “nice buildings”. This discourse is enough to show that architecture is now a sign and is one of the consumed objects. To create a sign is one of the most important steps of the creation process. Creative

policies of creative global cities are highlighted with creative design and physical environment. Architectural medium have more irrational, formalist and more pretentious form now than ever before.

McNeill states Eric Höweler's categorization of the latest generation of skyscrapers where he identifies "mediatic" examples which are "choreographed, not designed <...> a shift from the purely quantitative (how tall) to the *design of urban effect* (how spectacular)". Here, "the facades of buildings are designed to allow light shows, a high-resolution animation, in effect becoming projection screens for a new form of *urban sensation*, that manifest a presence in excess of their physical dimensions – a kind of *hyper-presence*. The impact of these designs can be dramatic, but can also be seen as a simple extension of the ways in which major buildings have always dominated their surroundings through projection, traced back to the bell-ringing of medieval cathedrals" (McNeill 2005: 47).

Creative would be to manage to create certain quality of *magic* on urban skyline using new technologies which will show that fantasy is possible. Besides the new technologies, magic is based upon certain hedonistic frame of mind, on signs, colors, night lights and other picturesque characteristics;

– **New approaches to the urban skyline** – considering it in completely different manner than usually we do. New approach to urban skyline, new phenomenon of visual experience, is manifested through novel theoretical framework that brings together the fields of urban geography and visual culture, constituting to it a notion of emotive geography. The backbone of this framework is the *dialectic of encapsulation / decapsulation*. "The dialectic refers to a volatile process of spatial production, based upon the interplay between subjective gazing and strategic urban landscaping and scripting. The *encapsulation process* – the creation of the city as a coherent realm of experience – involves a blending of politicized spaces of representation and spatial attachment, articulating what we will call politico-emotive geographies that invoke a range of feelings. These include, for example, awe, fascination and pride, sometimes to be replaced, through *decapsulation*, by disenchantment or intellectual problematic. Through the dialectic of encapsulation / decapsulation we can also deepen our understanding of the symbolic and emotional negotiations involved in the production of the "*city as spectacle*". The production of spaces of futurity as one form of encapsulation is production of urban panoramas and skylines through two (overlapping) forms: *the conjunctural* and *the hyper-representational*" (Jansson, Lagerkvist 2009: 26–27).

2. 2. Creativity and planned regulation of urban skyline

Considering the relation to the nature of their origin – urban skylines can be self-generated or being effect of the plan.

2. 2. 1. Self-generated urban skylines

Self-generated settlements and cities and its constructors *especially take into account natural conditions*, they connect to the ground (terrain). It is important because the main attributes of urban form as well as its macro images, are created on the basis of that relation.

In many cases it is the skyline of the traditional city. Every civilization has its own skyline image and every of them were characterized by its high objects. The skyline of every next civilisation in relation to the preceding one is characterized by new shapes of that objects, so, it could be said that creativity is present there as well. Main difference between skyline of traditional and modern, later, global city is non-existence of extremely high objects, like skyscrapers. There are small high differences from pretty uniformed height of total form of the city, and height difference between city landmarks and other, mainly compact urban form, are not as extreme as when there are skyscrapers.

It should not be taken for granted that skyline created in this way is characterized with more creativity because there were not any strict rules to oblige like when the planned regulation is in question. Too much liberty could contribute to the visual chaos caused by too much diversity and disperse of its integral parts. Skylines of the cities represent complex application and inexhaustible diversity of dynamic relations which are the consequence of varying horizontal and vertical dimensions of orthogonal, cube elements, and other outstanding forms. Accidental opposition of objects leads us to observe them one by one, while they are grouped in one more or less irrational profile. Since there is not consistent order, such “polyphony” of visual pressures could be perceived only as “visual noise”, that is, mainly non-structured sensor stimulating, which could be stimulative or disturbing, depending on who is observing. *Self-generated urban skylines are creative depending on individual authors of shapes of objects and their sense for narrow and wide context and creating relations between them.* Also, important role in all that had historical, geographical, natural, economical, social and religious factors.

In small Italian or French cities, in towns on Greek islands (see Fig. 4), as well, often self-generated, could be observed harmonically relation between picturesque character of its structure and rich diversity, which are manifested on urban skyline.



Fig. 4. Lindos Village at Rhodes – self-generated urban skyline

Urban structures this kind, which are based on natural ambient and relation with environment give considerably more possibilities for development of diversity, more than strict mechanical structures (Vasiljević-Tomić 2007: 141–143). Creativity of their macro-image lies exactly in that connection with nature, compact structure, their color specifics and liberty which enable its realization.

2. 2. 2. *Regulated urban skylines*

Connecting culture, economy and urban organization, creative solutions and specific areas, creative urban skyline are created as the reaction on particularities of the environment and specific requirements which are generated as result of that environment, but with clearly defined and high raised goal of affirmation of own region and own city and importance of role of planning and urban design. It is very important that there is vision of total urban macro-image and clearly directed and controlled changes toward it (contrary to spontaneous and uncontrolled growth), sense of order and organization. In praxis it is realized trough urban regulations. Following connections should be examined:

– **Creativity and aesthetic / visual regulation**

In most cities the aesthetic / visual dimension of city planning, which includes the planning of urban skyline, is underdeveloped. It is sometimes rigidly limited, for example, “in many communities in the United States use ‘*design review*’ to *regulate visual quality*. Certain number of urban designers and other professionals, criticize this kind of control as wrong, while courts support aesthetic regulations until they are contently neutral” (Stamps *et al.* 2005: 74).

Also, it is proved that variation of four attributes of individual objects – high, width, depth and distance from regulation line (small, middle or large) – make urban skyline interesting and pleasant, so if they are strictly regulated, it is harder to be creative, while more liberal, contextually independent directives could be useful in that sense (Stamps *et al.* 2005: 82).

The *color* is included in the field of aesthetic / visual regulation, because it is one of the attributes of urban skyline. There are regulations which are aimed to preserve contour colors of some cities (Paris is grey (see Fig. 5), San Francisco is white), which is dominant on the skyline.

Those regulations must be followed. In Jerusalem, for example, every modern object in suburbs must, by the law, be coated with Jerusalem stone which has natural pastel color in dawn, and again, at sunset, stone gives the city golden gloss (Kostof 1991: 319). Sometimes regulations are more flexible, so more creative solutions could be achieved. For example, when trying to achieve certain plans, desired closeness or distance in relation to present state and emphasizing certain objects or totalities (group of objects) on the city skyline, certain regulations must be followed by every author of the solution within certain given (or recommended) frame, to achieve certain illusions in space.



Fig. 5. Paris – grey color as a dominant on the skyline

The answer in urban context is, mainly, in the terms of harmony with the existing forms of buildings or ensemble. Sometimes the circumstances and planning may give right to the contrastive elements of urban form then harmony. In some cases, where the existing context is inadequate – the new dimension or “key” must be set through a *new development*, in order to achieve a successful future urban image” (Tošković 2004: 8), what represents creativity;

– **Creativity and height regulation**

The architecture which is now produced, along with the creativity, expresses a physical environment in which dimensions are far beyond the size of the human beings, where power and show off is dominant and competition has become very important. However, *distinct skyline was not always a need and desire*. In some cultures and periods of urban history, cities preserved uniformed, straight profiles. “In ancient China, it was customary to forbid structures higher than two floors, to prevent people to look from above on the Emperor when he was passing by” (Ford 1992: 182). In Cusco (Peru) there is, also, in power, a ban to build above the second floor, for the purpose of preserving visual (architectural) identity of the city (Tucakov 2009: 37).

Sometimes it *is permitted to violate the ban on high limitations*, for the purpose of creativity and better visual skyline. For example, when shaping skyline, city authorities liberate certain type of objects from the prevailing height limits. “Los Angeles in 1926 exempted by popular vote its new City Hall from the prevailing 46 m height limit, so it could climb up to almost three times that height and fix the than unremarkable skyline” (Kostof 1991: 282).

Zacharias also states the example of Vancouver, in which “the policy was adopted by the city in 1989 which mandated corridors free of buildings toward the mountains. Planners have since become concerned that the policy was producing a table – top skyline of little visual interest. The city later raised the building height limit by one-

third in selected areas. It is reasoned that a more distinctive skyline with landmark structures will result, even though the mountainous backdrop will be broken in places” (Zacharias 1999: 218).

– **Creativity and regulation of view corridors (important vistas)**

When considering view corridor in relation to urban skylines, there are number of questions which, in some way, explore the relation between creativity and height limitations for the purpose of preserving certain visually valuable vistas. For example, is it in some cases creative solution to allow or to limit certain height – is it more important to have a view on natural beauty or constructed attractive object or wide view on skyline; is the structure of view more important than total visible pleasantness? Further more, in cities with characteristic natural environment, how should we promote development and in the same time preserve view on natural beauties, is the view on natural environment more important than elements made by humans in the unique character and quality of urban skyline, could qualitative loss in pleasantness of the view on natural environment, be compensated by imaginative design, etc. In any case, *phenomenon of visual experience* in urban space mainly depends on making possible these type of views, because this kind of diversity in manner of understanding urban form contributes to its picturesqueness and attractiveness, diversity in space experience. Creativity of various and unusual points of view and diverse approaches to skyline has significant place in forming mental image.

Often there are the intentions of city authorities to preserve intact existent views on pleasant areas on urban skylines. However, that protection is flexible, so that the construction permit is usually given for high objects if it could be demonstrated that significant public beauty of build place will be the compensation of lack of view “while there are no directives or procedures which define what are those benefits from the single build objects” (Lukić 2010: 4);

– **Creativity and selection of location for positioning urban landmarks**

Considering that there is small number of skyscrapers which are beautiful themselves and that their number is something which is astonishing, which is best manifested on skyline, it could be said that their location is very important. Besides form and shape of objects, dimensions, style, material, color, visual connection made by coherent grouping creates feeling of unity of macro image, that is, a certain new quality in relation to value of single, and, for example, distant objects. High objects are often grouped in one district so that humane scale in other parts of city could be preserved.

2. 3. *Multidisciplinarity of the subject matter of the paper*

Supplemented standpoints of different scientific disciplines (fields) is best to present on concrete example of urban skyline, in this case, Shanghai’s. Its resurrection into a metropolis began in the early 1990s. Accelerated capital improvement led to a remarkable transformation of the city’s spatial form and associated functional activities. More than 4000 high buildings have been built, 13 of which are super high buildings, over 200 meters in height. Changes and urban processes which had brought Shanghai to growing into city of globalisation are well shown on both banks of river Huangpu,

trough two, different skylines. On one side of the river, there is new urban skyline of Pudong, high-tech financial district.

On the other bank, there is Bund, with preserved old colonial buildings.

River Huangpu, in the same time, connects and divides the city; it symbolizes modern impact as well as historic continuity of Shanghai and represents tension between old and new, between facts and fantasy. Visitors can decide if they want to look at the symbols of past or turn their backs to it.

On these two urban skylines, creativity is represented by every entry stated in section 2.1. – there are new shapes and original design of objects in Pudong and its recognizable, specific all-inclusive skyline shape, as well as presence of high technologies. Further, in Bund, there are new relations created between preserved old buildings in the foreground of skyline and modern objects in the background, then, specific way of comprehending and approaching to both skylines which are connected by the river into one magical and conjunctional panoramic site.

Fields of economy, psychology (more specific, urban perception which is based on perception psychology, environmental psychology and experimental psychology) and aesthetics (more specific, urban aesthetics) are important for explanation of some phenomena and elements on urban skylines, and, also, realizations from these disciplines should be used in the process of their shaping, as support for creative actions.

Modern world, economical, global tendencies brought to development of urban marketing, branding of articles of all kind, and one of them is new skyline of Pudong. Futuristic vision of Shanghai, is materialized in it, especially in Oriental Pearl TV tower (height 460 meters) which is an icon today and the incarnation of national and local symbols of modernity (Jansson, Lagerkvist 2009: 34), and unavoidable tourist attraction. Economical influence could be noticed in most of regulations of Shanghai skyline, primarily at height regulation. Building height becomes a key marker of identity, success and competition in the built urban environment. The heightening and concentration of urban skyline, as national trend, as well as district specialization and zone planning are produced, partly, by processes of comprehensive urban planning and urban renewal, and joint processes of privatization and investment (Gaubatz 1999: 1519). The constantly shifting balances of power between the governmental and economical interests have greatly complicated the implementation and enforcement of urban planning in China's large and rapidly developing cities. "Although China's urban planners now make use of internationally recognised practices, such as zoning regulations, height restrictions and controlled development, to promote a vision of the character of the city as a whole, their efforts are often blocked by conflicting regulations and regulatory agencies as well as a power structure which permits numerous concessions to be made to high-profile developments. As a result, planning often seems to follow rather than to lead patterns of development and investment" (Gaubatz 1999: 1514).

Urban perception and urban aesthetics could influence a lot the aesthetic / visual regulation, height regulation and regulation of view corridors. Empiric research results about aesthetic preferences of users of urban spaces could be incorporated in regulations in order to attain aesthetically desirable skylines. In the field where these two

disciplines overlap, various aspects of visual and aesthetic experiences of urban form and its projection, urban skyline, could be discussed. “The highest level of aesthetic dimension of macro urban totalities could be defined with tendencies to achieve aesthetic experience as especial state of consciousness (fascination with some aesthetic totalities, images)” (Marković 2007: 159). Aesthetic experience of urban skyline of Pudong could be classified in the category of special aesthetics, it is a result of our inherited curiosity and need for exploration of informationally stimulated and provoking contents. Application of the principles of visual perception (for example, Gestalt principles) will always improve urban skyline. Knowing, for example, the principle of the relation between form and background, we will know that the impression of gradual fading away of skyline of Pudong into sky originates from irregularity of its contour which was created from highly elevated groups of buildings. On the height of vertical field of vision of urban skyline influences its shape, too. More accurate, exceptional height of already mentioned Oriental Pearl TV tower which dominates the skyline, creates the possibility that the sky is visibly high above it, whereas, for example, in the case where the skyline is mainly flat, the impression is very different.

Conclusions

Urban policies should be based on innovation and creativity, enabling maintaining character and coherence of urban form (and consequently, urbane skyline) as response to social, cultural, economical, technological and / or political development and changes. That is the way to provide a survival strategy for the visual identity of the city and its skyline. In the ideal case, *if planned solution of total macro-image is done well and specific laws and regulations were established in keeping with it, the answer on question, which ratio of creativity and planned regulation is optimal in the process of creating visually concurrent urban skyline, is simple: all regulations should be kept and creativity has no limits. In other cases, it is necessary to establish flexible scope of regulations, so that single elements (architectural objects) of urban skyline could be realized in balance between limitations and desired result.*

Regulation of urban skylines should establish values of planning in whole and in details. Instead of strict limitations, creativity of the solutions and predominant character of every locality is expressed best by possibilities of *flexible application of any regulation. It is important to estimate what scope of regulation is natural.* Policies should be formulated to be operative, not to create uniformed skylines without variations and articulation. Since there are a lot, often opposite, requirements from private initiative on the one hand, and public interest on the other hand, clearly defined limits (which will not be rigid) should be established to define common ground for negotiation and find acceptable solution for both sides. *That is the way to keep all regulations and, in the same time, to give the space for new ideas and innovative solutions.* In this way city planner could realize himself as visionary and designer and architect could approach to the process of shaping segments of urban skyline with more liberty, using the ability and talent to establish balance between limitations and wanted.

Presence of creative administration is important, too. It does not matter if the city is affluent or poor, *creative leadership* is the key in overcoming lack of ideas, combating bureaucracy and general apathy. It gives initiatives and clearances for various actions and procedures, including the field of planning, and that is the reason why its important role in creating creative city, that is, creative urban form and its skyline, must be emphasized.

References

- Abu-Ghazalah, S. 2007. Skyscrapers as Tools of Economic Reform and Elements of Urban Skyline: Case of the Abdali Development Project at Amman, *Middle East Technical University Journal of the Faculty of Architecture* 24(1): 49–70.
- Attoe, W. 1981. *Skylines: Understanding and Molding Urban Silhouettes*. Chichester: John Wiley & Sons Ltd.
- Bacon, E. N. 1995. *Design of Cities*. London: Thames and Hudson.
- Bajić-Brković, M. 2009. Mogu li kreativne ekonomije da proizvode održiva rešenja? – Neka evropska iskustva, *Arhitektura i urbanizam* 24–25: 47–60.
- Florida, R. 2002. *The Rise of the Creative Class: And How It's Transforming Work, Leisure, Community and Everyday Life*. New York: Basic Books.
- Florida, R. 2003. Cities and the Creative Class, *City & Community* 2(1): 3–19. doi:10.1111/1540-6040.00034
- Ford, L. R. 1992. Reading the Skylines of American Cities, *The Geographical Review* 82(2): 180–200. doi:10.2307/215431
- Gaubatz, P. 1999. China's Urban Transformation: Patterns and Processes of Morphological Change in Beijing, Shanghai and Guangzhou, *Urban Studies* 36(9): 1495–1521. doi:10.1080/0042098992890
- Görgülü, T. 2007-2. Creativity, Creative Cities, Created Architecture, *ITU A|Z* 4(2): 81–100.
- Heath, T.; Smith, S. G.; Lim, B. 2000. Tall Buildings and the Urban Skyline: The Effect of Visual Complexity on Preferences, *Environment and Behavior* 32(4): 541–556. doi:10.1177/00139160021972658
- Jansson, A.; Lagerkvist, A. 2009. The Future Gaze: City Panoramas as Politico-Emotive Geographies, *Journal of Visual Culture* 8(25): 25–53. doi:10.1177/1470412908100902
- Kostof, S. 1991. *The City Shaped: Urban Patterns and Meanings Through History*. Boston, Massachusetts: Bulfinch Press, Little Brown and Company.
- Kunzmann, K. R. 2004. Culture, Creativity and Spatial Planning, *Town Planning Review* 75(4): 383–404. doi:10.3828/tpr.75.4.2
- Landry, Ch.; Bianchini, F. 1995. *The Creative City*. London: Demos.
- Lukić, I. 2010. Vizuelni aspekt regulisanja urbane siluete, *Nauka+Praksa* 13: 61–64.
- Lynch, K. 1960. *The Image of the City*. Cambridge: The MIT Press.
- Marković, S. 2007. *Opažanje dobre forme*. Beograd: Filozofski fakultet, Univerzitet u Beogradu.

- McNeill, D. 2005. Skyscraper Geography, *Progress in Human Geography* 29(1): 41–55. doi:10.1191/0309132505ph5270a
- Salingaros, N. A. 1999. Urban Space and Its Information Field, *Journal of Urban Design* 4(1): 29–49. doi:10.1080/13574809908724437
- Stamps, A. III; Nasar, J. L.; Hanyu, K. 2005. Using Pre-construction Validation to Regulate Urban Skylines, *Journal of the American Planning Association* 71(1): 73–91. doi:10.1080/01944360508976406
- Tošković, D. 2004. Sustainable Urban Environmental Quality, *Spatium* 11: 7–20.
- Tucakov, A. 2009. Kusko – Pupak Sveta, *City Magazine* 5: 37.
- Vanolo, A. 2008. The Image of the Creative City: Some reflections on Urban Branding in Turin, *Cities* 25: 370–382. doi:10.1016/j.cities.2008.08.001
- Vasiljević-Tomić, D. 2007. *Kultura boje u gradu: identitet i transformacija*. Beograd: Univerzitet u Beogradu, Arhitektonski fakultet.
- Wikipedia, The Free Encyclopedia*. 2011. *Wikipedia, The Free Encyclopedia*. 2011. Creativity. Available from Internet: <http://en.wikipedia.org/wiki/Creativity> [Last access: 05-01-2011].
- Zacharias, J. 1999. Preferences for View Corridors through the Urban Environment, *Landscape and Urban Planning* 43: 217–225. doi:10.1016/S0169-2046(98)00104-2
- Zukin, Sh. 1995. *The Cultures of Cities*. Oxford: Blackwell Publishers.

SANTYKIS TARP KŪRYBIŠKUMO IR PLANUOJAMO REGULIATYVUMO MIESTO PANORAMOS APIPAVIDALINIMO PROCESĖ

Ivana Lukić

Santrauka

Šio straipsnio tema priklauso daugiadiscipliniam laukui, iš esmės sudarytam iš urbanizmo ir urbanistinio dizaino kaip jo dalies, o taip pat iš architektūros ir kitų sričių, tokių kaip estetika, psichologija ir ekonomika, papildančių pagrindinius šio tyrimo atskaitos taškus. Miestų ar didžiųjų jų dalių panorama kaip makro urbanistiniai vaizdai čia tiriama santykyje su jų kilme ir pobūdžiu – iškilę patys savaime ar kaip planavimo rezultatas, kaip vizualiosios patirties fenomenas ar naujų fasado technologijų taikymas. Keliamas klausimas, koks kūrybiškumo ir planuojamo reguliatyvumo santykis yra optimalus, kuriant vizualiąsias miesto panoramas? Jei visa apimančio makrovaizdo suplanuotas sprendimas yra teisingas, tai atsakymas persąsi būtent toks: gali būti taikomas bet koks reguliatyvumas, o kūrybiškumas yra beribis. Visais kitais atvejais būtina steigti lanksčius reguliatyvumus, kad paskiri miesto panoramos elementai galėtų būti realizuoti apribojimų ir siekiamo rezultato, nepažeidžiant šios pusiausvyros.

Reikšminiai žodžiai: kūrybiškumas, miesto panorama, miesto panoramos reguliatyvumas.

Received 29 June 2011; accepted 25 October 2011