

Evaluating Idea-Finding Ways in Architecture, to Create a Childish Tone and Structure in the Design of Spaces for Children with Particular Reference to Children's Literature

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Abstract: Designing spaces related to children are a relatively new concern among architects, urban planners and landscape architects. This trend is associated with requirements in the design. Sociology and psychology data emphasize on the importance of childish content production. However, relying on them is only sponsored the creation of the most basic requirements to shape the design for a children's audience. Hence, it is necessary for the architect to consider the fundamental designing necessities for children (health care, development and physical development, learning, social involvement, etc.) and to look for sources of inspiration for designing. One way to achieve this goal is searching among the things that the child expresses, such as childish game or studying what the child accepts and believes, such as children's literature. In this study, it has been tried to evaluate the first steps of the children's literature capacity as a source for finding ideas in architectural design. Therefore, it has been attempted to find an answer to the main question, how can the children's literature affect on the architectural spaces design in related to children? To find an answer to that question, at first it has been trying to introduce children and a brief introduction of the children's content concept and what makes the literature as "childish". In the next steps, those children's literature capacities which may be ideas to create childlike qualities in different types, were introduced.

Key words: Children's literature, children's architecture, architectural tone, qualities, capacities

INTRODUCTION

In this study, the basic problem is examining ways of referring to children's literature for finding design ideas to create an appropriate architectural space for a children's audience. Such an issue has two main aspects. First, investigate and prove the necessity of the creation of the childlike qualities in architectural children and second, the introduction of these qualities, concepts, techniques and common concerns, between architecture and children's literature.

The evolution process in the creation of artificial spaces related to children can be followed by the efforts to develop solutions, in order to protect the safety and health of the child, to introduce ways to make child participation in the creation and optimal utilization of artifact spaces. This process is the product of identification, physical needs of children, then, recognizing the importance of the child's participation in the creation and protection of his environment in sustainable development and then, attention to the

education and learning capacities of architecture for the child. The artificial atmosphere, suitable for children while it is coping with his physical strength and properties, it has certain qualities that make it attractive to children, understandable, identifiable and memorable.

Childhood is as the main course of education and human development. However, positive attitudes to the childhood, or even to recognize it as a distinct course, have not always existed. After the Industrial Revolution and with the experience of urban life on the eve of the modern era, the need to protect the child and the childhood were raised. This matter was first born with the support laws to protect the health of children in the newly industrialized cities. However, in the postmodern world, the story took another form: in the age of communication, the decline of childhood was raised (Postman, 1999). The child protection was no longer limited to maintain the health of children. This time, the goal was maintaining the conditions to have a childhood. After the unpleasant experience of audience sameness in the modern architecture, now, creating a childish environment was

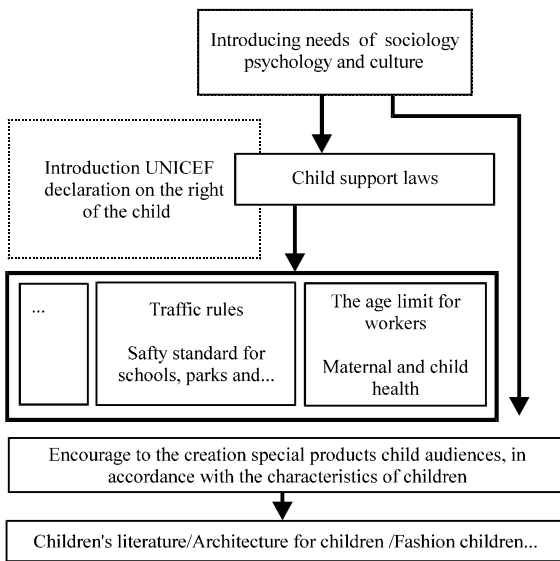


Fig. 1: The need to create content for children

supposed to be the ways to achieve this purpose. The childish environment is a space where the child subjects to appropriate information and has experience of his own. (Fig. 1).

Children's psychology is a monitoring tool and the introduction of the characteristics of children as the audience. The characteristics of children in different studies were the subject of Psychologists' research on his physical and social growth and the child was the main study field in developmental psychology, educational psychology and cognitive psychology.

If the task of introducing and measuring the desirable qualitative of children, in products related to him will be the responsibility of child psychology, producing the objective content for those qualities will be the responsibility of different specialists. In addition, children's literature is the oldest specialized form of a field for a children's audience. Qualitative study of the structure, content and presentation of children's literature can manifest the qualities that make the effect "childish". In this study, it is assumed that with the translation of this quality in architectural expression, in some way, we can reach a short way to create childish architecture. It means that the architect, rather than dealing with a single data from the field of psychology, he relies on the content for inspiration that, at least has been successful in one-step, in creating a relationship with the child. The study of what the child says or the familiarity with what the child accepts and believes will help the architect to enter his inner space. With this idea, creativity is the product of a puzzling contradiction "for original thinking, we should be familiar with the idea of others".

These ideas can be the source of any determined ideas. This quote, from Kneller can be considered as the reason for searching idea-finding sources in architecture, outside the world of architecture. Three questions that direct this search include:

- How can the children's literature be effective on the architectural spaces related to children?
- What are the tools and factors influencing writers, in creating the atmosphere of childhood, in children's literature?
- What is the method of the architect, to create the physical equivalent of the tools and elements?

In order to answer these questions, the children's literature, as a form of art that consider particularly the children's audience, has been briefly investigated, so that its capabilities will be discovered as a source of idea-finding in architectural design for children.

The child: Definition of childhood is different according to the culture of the target population. However, simplicity, the childhood can be an integrated age range distinguished from other periods of life.

The most fundamental characteristic of a child is his constant development and the targets of development are an evolution: That means, the child acquires skills to flourish his physical and intellectual talents to the fullest (Nejad, 1988). Therefore, the development can be considered as the result of maturation and learning.

Maturation is the gradual creation of physical and intellectual talents and learning is the factor of emergence and individual talents training that during life, allowing him to exploit his natural forces in the environment (Njead, 1988). Development and dynamites of the child to make him sensitive to everything that is around him, so that he benefits from natural means at his hands and could see, hear, touch, taste and smell. Child's method, in the face of the world around, is searching and entering into the environment.

Architecture for spaces related to children and childlike quality of architectural space: As the definition of a child has been changed in different historical periods, how to communicate with him has been changed too, before the child was defined as an adult with smaller sizes. With this look, since all human beings are the same in terms of biological structure, so all of them are exposed to the same information, that has the same message and a way of expression.

However, gradually, childhood found its independent meaning. Children's educational style, fashion for

children and children's literature, they are all the products of this period. Some believe that, since the domination of the media today, again blurring the boundary between childhood and adulthood (Postman, 1999), thus, it is necessary to define certain words, for the supply of information that the child receives.

The meaning of the information is whatever that the child receives from the environment. Thus, the architectural environment, in areas relating to children, is a kind of media for him that the importance of creating and strengthening it, in architectural spaces with children (which are the hosts activities for children and responsible for special needs of children) gradually, will be more.

Differences architecture of spaces related to children with similar titles which are designed for mature audiences, is due to the type and quality of current activity in this space as well as differences in the scale (physical) of the audience that will affect the standards that make the space practical for each of the two groups of audiences.

Sometimes, the architecture success in spaces related to children is only measured with their capabilities in hosting-related functions for children. A situation that is the necessary but not sufficient condition for creating a space associated with the child. The ideal is achieving a quality in architectural space that welcomes children and at the same time will be accepted by him. Architect, in an effort to achieve this status, can place his point of departure in the design, relying on the experience of specialists of other professions that have successfully created works for child audiences.

Children's literature: Children's literature has a clear but fundamental condition: when the audience is a child, the author must know in advance to communicate with him in a certain wavelength (Eslami, 2001). Children's literature, due to a specific audience is distinct from the root of literature. Children's psychology has introduced this specific group of audience (In order to avoid prolongation of sentences, bringing issues related to introducing children and childhood is neglected).

Departure from children's literature to children's architecture, the choice of approach: With the proposal of Antoniadis in the poetics of architecture book, architects can refer to the literature, both for learning and for the inspiration. He believed that the architect could use the literature directly, indirectly and combine in the creation of his works. Three proposals of Antoniadis are in the form of Table 1 (Antoniadis, 2007).

Table 1: Literature as inspiration for architecture, based on (Antoniadis, 2007)

Rows	Approach
1	Recreating the physical locations in the story with architectural media
2	Providing architectural interpretations of the literary work
3	Recreating the tone governing literature

Direct recreating of the spaces described in the text in the framework of architectural media: Architecture can be the visualization of literature, in the sense that space and architectural qualities can provide tangible metaphors of literature. This is perhaps the simplest and most mundane metaphor but it allows the architect to recreate the story in the space with a similar approach of set design in theater and cinema.

On the other hand, literature can also refer to man-made spaces. In fact, the creation and strengthening of dominant mood of literary with the descriptions of architectural space, has a known background. From the appearance of romantic novels from the seventeenth century such depictions can be found (Collins, 2008).

Significant works of literature, especially children's literature have taken the theme and story nodes from spatial elements and places, such as the secret garden, a deserted island, a tree house and etc. In this story, such spaces are the main characters of the story. When the author describes these elements, he in fact, provides a description of the architectural spaces that the child has chosen and refuge to them: a description of ideal spaces for children.

MATERIALS AND METHODS

Place in the children's stories: Child's tendencies to have their space where he can control and has a clear difference with the outside world have been confirmed in psychology. Children's stories with the theme of "A Place of One's Own" are well able to play a detailed role in creating tangible terms in architecture based on the natural tendency of children.

"The child is trying to define himself, according to his personal achievements, he tends to leave traces on the surrounding world and therefore he implores a space for himself" (Sturm *et al.*, 2008).

The researchers provide a place for such a hero in their story that has the ability to meet all these demands. This is where the architect can act. He can rely on the result of the author's imagination.

In those stories for children that have hidden place's theme of the child, such places are described with real physical properties, the real places that are made or discovered by the child who is a hero of the story and will be richer with his imagination. This means that the ideal

Table 2: Architecture and the perfect story place

Necessity	Researcher solution	Researcher solution
Escape	Capture hidden place Control the entry of non to places	Providing the facilities for selecting territory in the space
Control	Space creating by the protagonist Improvement of space, by character	Involving children in the design process Design based on the child's creations, in painting media and so on Trying to maintain or restore the natural beauty of the place (e.g., by entering natural elements, green, light tact and natural ventilation for the space.) Adding personal elements into space and "own" it (For example, with the possibility of drawing on the walls, making changes in the layout space)
	The definition of special rituals Naming ceremony	Markings space (e.g., by predicting the nodes in the space with the physical characteristics of tangible and memorable)
	Entry Rituals	Highlighting the hierarchy of Entry, by defining distinguished architectural organs Input defining in the scale of the child, in addition to embedded normal access

space has the ability to host the special behaviors of the child such as games, drawing, storytelling and fantasy (Sturm *et al.*, 2008).

What can encourage architects to copy the hidden spaces ideal for children in children's stories is the change that the characters experience in the stories. They often refuge in the hiding places as a damaged and alone, but after going through the steps, they return with success and self-esteem, among others and create a healthy relationship with them. That is something ideal in the children's growth.

In order to use these stories as resources to create an architectural space, the architect can think about the following matters:

- What are the reasons for the protagonist to create that place?
- What is the specification of those places?
- What sense will be created in experiencing that location in the child?

Two main reasons for children's stories heroes in creating a secret space are escaping and having a control (Kathy, 1991). Many of these children are facing the harsh reality around. They may be orphans or they may have bullied or they may cut off from their surroundings for any other reason.

According to the Storm, Bosman and Lambert (The group has examined 18 books, some of which include: tell me stupid and Tucker from Thomas Berdzay. The day Xavi becomes Charles from Akim Braugher. Frances Hodgson Burnett's The Secret Garden and Julia tree from Alan Garner), the characters in these stories have three solutions to retain control over their secret realm:

- They are the creator of their own space or change it to their own needs and desires
- As those who are fluent in that space, often they develop laws and rituals related to space

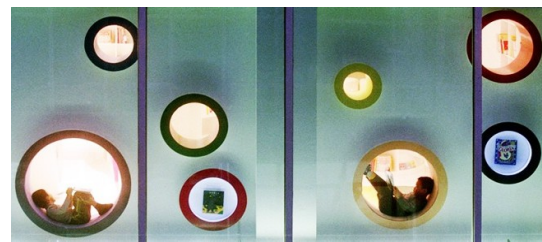


Fig. 2: A space of their own. Bookstore Kid's Republic, Beijing, China ([www. designrulz.com](http://www.designrulz.com))

- They have the responsibility for controlling the entry of people into space so often only very special friends are allowed to enter (Sturm *et al.*, 2008). In this way, it can be said that the child-hiding place has features that can be used directly or with respect to the ideal conditions of safety and mental health, in creating space for children. These spaces can be introduced as the following features:
- They are detached. When the child is in them, he feels himself fully in the space that "despite outside" it is absolutely right for him. Safe, pleasant and at his disposal (Fig. 2)
- They have quite certain entry threshold
- They are interpretable which means various interpretations can be understood, they have the capacity and incentives the imagination of children (Sturm *et al.*, 2008)

In Table 2 lessons of these hidden places are gathered in children's literature for architects.

Architectural interpretations of the literary work: Architect can see the rules governing the structure of the work and use the means of expression and current system in poetry and fiction, to reach appropriate architectural theme (Antoniadis, 2007). That can be considered equivalent to restructuring the work with the media of architecture.

Table 3: Story structure

Elements of the story	Definition and types
Narrative (Sharif, 2002)	Product of mind of the writer Pre-made The narrative/the beginning and the end The speaker and the audience Signs and referred to an absence
Validity chain (Sharif, 2002)	The covenant Chain of: in it, the covenant, promises and close and break them will be discussed. Executive chain: the test, struggles, efforts and functions of these will be discussed and part of each narrative is devoted to this subject Detached chain: travel and went back deals. These features are the dominant stories and the story goes with this kind of trips and excursions (Sharif, 2002)
Actors (Omrani, 2001)	Role: recognizer/subject identification; transmitter/receiver; helper/disagree The relationship between the two roles Wish/search/target; relationship; protection/prevention
Validity chain (Omrani, 2001)	Creating accidents and advance the story; knot dissension and disturb the balance. Relief and relaxation; wonderful surprises

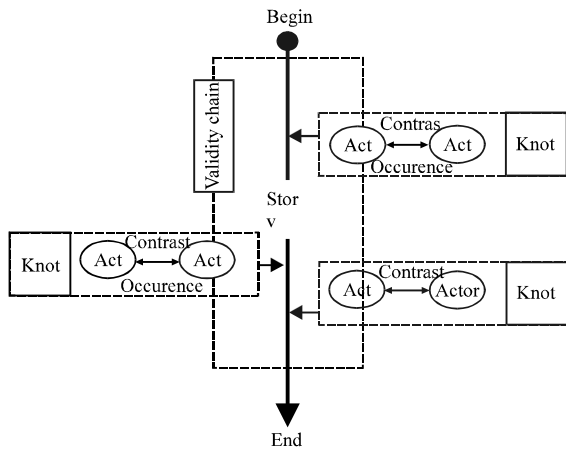


Fig. 3: A graph of narrative with three major events. The narrative chain links all the events

In the this way of dealing with architecture based on literature, it is assumed that the architect can find strategies to find inspiration from literature through the observation of rules governing the structure of a literary work, through the study of the writer’s style to express the essence of the overall plan and by reference to the structure of single effect (Antoniadis, 2007).

Storytelling is not only an emotional expression of the soul, literature itself has combined emotional stimuli, in the form of a logical structure. Here, it is assumed that, returning to the basics of storytelling, studying the structure of the story and what organizes it can convert to a system for organizing the elements of volume and space. For this purpose, studying the organs of stories for children and the relationship between them is essential.

Structure and narrative elements in the story of the child: Narrative is the spine that the body of the story

exists revolving around it and grows; narrative is the sequence of preconceived events that are connected to one another non-randomly (Michael, 2004).

The stories of moments arise which has already been read or heard and that is why they are understandable for the audience. Based on this definition, any narrative has the three main elements in time sequence, the sequence of events and the logic of events in itself (Fig. 3).

With Greimas’ theory, in the story narrative structure, we can reckon the actors in the story and the narrative chain and nodes of the story that in fact, form the backbone of the narrative. Table 3 is devoted to introducing these elements.

RESULTS AND DISCUSSION

Story structure-architectural structure: Narrative as a structuring element to the child’s story is a reminiscent of the hierarchy in a building or a combination of the original volume. Children narrative shape (with a definite beginning and ending) can be represented in system simple form, clear and tangible, in architectural figure. Clearness in this system can be the product of using the familiar signs, in markings on the new structure (Sharifi, 2002).

Activists of the story, in a narrative chain, encounter with the events in event creation form, node dissension, relief and wonderful surprises. In the process of moving in architectural space, one can use elements of accidental architecture represent nodes and elements of wonderful surprises (Fig. 4).

Recreating of the tone ruling the literary work for children: Recreating the dominant tone on the work of art with architecture media are the ways in which the architect can lean on it and based on a literary work, create a work in the architecture. Tone, in speech and writing is a verbal features that based on the selection of vocabulary, composition and other grammatical structures

Table 4: Creation tools for children tone in children’s literature

Literary devices	Solution of poet	Sample
Synaesthesia	Development of vocabulary and expressions related to one of the five senses based on imagination. This array of words and phrases, a sense will be transferred to another	Color of silence/red sound
Paradox	Image composition or expressions that the two faces of them are conceptually contradictory. This combination works more effectively with stress in the minds of the audience	Silence songs/full of empty
Defamiliarize	Deviation from the standard language (adults). For children, this defamiliarization is completely normal. Specific application verb, adjective combinations or new additional and unexpected words, adverbs innovative, new naming The prominence of the language	



Fig. 4: Track and indent. Bookstore kid’s Republic, Beijing, China (www.designrulz.com)

or malfunctioning, makes the word of the creator formal or informal, literary or scientific, humorous or serious, direct or indirect, simple or casual and so on (Abbas, 2014).

Childish tone in poetry for children (as opposed to the story of the child) seems more mature. The importance of tone and its variants in the poetry of the lyrics is undeniable (It should be noted that the belief Mahmoud Kianush that knew the song the only requirement for children poem, is not acceptable by the author. Persian and Latin Sources also had no such a basic premise). This is the fact that with a little neglect, we can describe the in the story for children smooth and straightforward.

Children’s poetry has a certain image quality and tone in poetry for children depends largely on the image that makes the poet. These images are fixed elements of the poetry and the poet gives objectivity through them, to abstract concepts, which are in his mind. The image quality of children’s poetry can be an incentive to the study of childre’s poetry by architecture.

Kadkani knows the image as “feature set of artistic expression that are into poetry and its original context is, different types of simile, metaphor, virtual documents, password and various forms of mental images” (Shafiee and Reza, 1993). These images are an event that occurred in poet’s speeches and reflect on his emotions and experiences. The image that the author makes is sometimes the product of interaction or confrontation between the two events in the language that is

prominently the effect of language. Visualization tools (especially in poetry) can be introduced into two main groups, using an array of literary and following the principle of de-familiarity. Table 4 provides the two groups.

Architecture and childlike tone: Efforts to select and create a certain tone in architecture, can begin after reading the poem or story, by the architect, attempt to recreate the literary work tone can be the question of design (Antoniodis, 2007).

With the aim of creating architecture, based on the poems and stories for children, attention to a childish tone has particular importance. Earlier it was mentioned that the poet uses what tools to create the right tone, in his work. The architect’s tool is something else to create the desired atmosphere in space. An architect’s game with volume elements and combine them, communicative, full and empty spaces, the relationship between tissues, hierarchy on the use of shapes and colors, changes and the intensity of light and shadow, surfaces and depths, which give him the possibility of creating different spaces with different moods (Antoniodis, 2007).

With the aim of creating a childish tone, in architecture, we can use the tools that are affected by the measures that the creators of children’s literature have used (Fig. 5).

It seems that a wide range of architectural tools can be used for architectural design, relying on what has come in the children’s poetry. Painting a sense of the poetry will use of words, which are sensory descriptor, in combination with other senses. The effect of this array is adding layers of human body experiences, in a combination of new words which is comparable with enriching the human sensory experience in the architecture, so turn it to the multi-sensory phenomenon. Choosing what the architect gives to the children to experience are affected from different sources of inspiration (For example with the intention of recreating the atmosphere of a childish story!).

Tone in poetry and fiction is affected from the image that the author makes and as noted above, the image is sometimes the product of interaction or confrontation

Table 5: Childlike tone in architecture

Literary solution	Solution of architecture
Sense integration	Rich architectural elements with layers of texture, color and sound design Walls covered with concrete and specific context. Cover holes, so that create the reflection or refraction of light
Paradoxically	The paradox of dynamic and static The paradox of light and matter The rhythm of full and empty volumes in the original scale and building details
Defamiliarize	Unprecedented interpretations of architectural elements Statue of various architectural elements, playing with scale



Fig. 5: The bookstore kid's Republic, Beijing, China
(www.designrulz.com)

between the two linguistic events. The simplest type of communication that can be assumed between the two events and consider the physical interpretation for it in architecture, is contrast: light, shadow, roughness and softness are materials example of this contradiction, in the form of architecture. This clear connection between the two events is simply visible and understandable by children (the audience with little prior experience).

The researcher, in poems and stories for children, with an emphasis on de-familiarity, creates a kind of prominence, both in language and in the narrative effect. This de-familiarity with architecture turns to a kind of unexpected, yet understandable terms (by children) from the elements in the space.

CONCLUSION

Children architecture, in (some countries), has left behind its early stages and as a teenager, in the direction of identity, needs a role model and requires something beyond the rules that psychology, sociology and law (such as squeamish parents) issue.

The impact of children's literature on children's architecture spaces can be considered the same as a friend who has taken a path once and now gives his experiences to his younger friends.

While in children's literature, one can observe multiple references to the architectural qualities, on the

other hand, in the structure and atmosphere of poetry and fiction for children, there are qualities that can be reproduced in architecture. Architect's efforts in this direction are a step in line with offering child friendly architecture. The quality in architecture that is perceived by children and is remained as a pleasant physical experience in his mind and richer his storage experience.

Study the places that have become an effective kind of character in the children's story, introduce the optimal spatial characteristics of children. These qualities can be strengthened by providing architectural terms from the structure of the work, highlighting the components of the structure and imagining the childish tone of the literary work.

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