Influence of Urban Fabric on Child's Upbringing: A Comparative Analysis between Modern and Traditional City

Mohamed A. Tantawy, Nourelhoda A. Hussein, Moataz A. Mahrous

Abstract—New planning and city design theories are continuously debated and optimized for seeking efficiency and adequacy in economic and life quality aspects. Here, we examine the children-city relationship, to reflect on how modern and traditional cities affect the social climate. We adopt children as a proper caliber for urbanism, as for their very young age, they are independent and attached to family. Their fragility offers a chance to gauge how various urban settings directly affect their feeling of safety, containment, and their perception of belonging for home territory. The importance of street play for the child development process is discussed thoroughly. The authority they have on their play (when and what to play) pushes us to our conclusion. A mediocre built environment characterized by spontaneity and human-scale semi-private urban spaces, is irreplaceable by a perfectly designed far away playgrounds. Street play has a huge role in empowering children for a gradual engagement with grown-ups' urban flow.

Keywords—Child's psychology, social activity, street play, urban fabric.

I. INTRODUCTION

IT is well defined in the literatures of history and sociology that what it means to be a child is culturally constructed. Childhood is defined according to space and time, it gains its meaning from the norms and perceptions of the society [1], [2]. Spaces underlie the meanings of childhood defined by societies through the way the child uses and experiences them. How spaces are designed and formed affects directly how child perceives the world and how he behaves towards it. A child brought up in a modern city has a different perception than the one brought up in a traditional city. Each one behaves differently in this context. The fabric of the cities produces social networks in which a certain behavior setting is created; these settings are the reflection of the social understanding of childhood. These understandings of childhood underlie the way that adults negotiate and control children's use and experience of urban environment and public space.

M. A. Tantawy is B.Sc. graduate in Urban Planning & Design in the Architecture Department, Ain-Shams University, Cairo, Egypt (phone: +2 011 457 442 27; e-mail: mx.tantawy@gmail.com).

N. A. Hussein is B.Sc. graduate and Master student in Architecture Department, Faculty of Engineering, Cairo University, Cairo, Egypt (phone: +2 010 028 025 70; e-mail: nour_mzn@hotmail.com).

M. A. Mahrous is B.Sc. graduate in Urban Planning & Design in the Architecture Department, Ain-Shams University, Cairo, Egypt (phone: +2 010 662 631 11; e-mail: moatazmahrous@gmail.com).

II. MODERNITY AND CHILDHOOD

The perspective of childhood has changed during past centuries. In the nineteenth-century, children were not yet excluded from workforce; they were taking responsibilities that we nowadays would only assign to adults. During the twentieth century, childhood itself became increasingly valued which emphasized the development of the children on their own premises [3]. This modern stress on the child's right and need for independent development suggests that children should take part in organized activities in order to enjoy a proper childhood. That required a separation of children from the adults' lives.

Research concluded that in modern societies, compared with other traditional ones, children spend less time playing outdoors [4], [5], and the sight of children meeting friends informally or running responsibilities in the neighborhood has become increasingly uncommon [5]. In addition, the home has become a more frequent venue for children's play, while outdoor play tends to be organized and supervised by adults [6], [7]. Nowadays, children are more likely to spend their free time using an electronic device rather than getting physically engaged with the society or other children.

Modern societies depend on institutions in distributing responsibilities. This took away responsibilities from the hand of people and made them totally dependent on these institutions, as a result, people do not have a full control over their own life as well as their children. Children are not any more allowed to explore the world freely. Parents who handled their parenthood responsibility to institutes are now the one who are controlling the time and activities of the children. These institutions have designed certain spaces for children to take care of them and keep them safe from the adult world and only allow them to have certain planned experiences. Organized activities are supposed to have a more suitable setting for the creative development of the individual child's talents than unsupervised play in the streets.

The tendency for children to spend their leisure time at a greater distance from home is also a result of the spatial development of modern society. This has also implied a greater separation of children's physical world from adults', which means that more time is spent chauffeuring children to places specially designated for them (and only them), like child-care centres and leisure establishments, that are often located on the peripheries of towns, which further enforces the need for car chauffeuring. This mobility scheme is hardly safe in larger cities, which pose numerous dangers for children in

particular. With the increase of mobility for adults in cities, children's mobility has decreased [8]. The new transportation means of adults, private cars in particular, have confined children into specially designed "non-dangerous" areas; else, they were considered in a hazardous situation that requires complete adult supervision. The dimensions of large cities where neighborhoods hardly have sufficient autonomy to make them well delimited urban entities, as well as car traffic that still has priority in most big cities, are major obstacles today for maintaining a scale acceptable for free movement of children in urban settings [9].

III. ROLE OF PLAY IN CHILD DEVELOPMENT

Play is one of the most powerful themes within the field of human development, whether seen as an end in itself, or as the release of excess energy. In this paper, we examine play as an essential concept in child development, to investigate the child-city relationship and reflect on city design social implications. The classical notions of play are convenient with the beliefs assumed by contemporary developmental psychologists who stress the importance of personal experience and adaptive processes in human growth. It assumes that play, as the main basis of civilization, is unique in that it is a pure activity and remarkably alike for all people. It also comments extensively on the importance of play as a distinct and integral factor in the cultural life of society. It observes that civilization arises and develops as play progresses [10]. The play is defined as a catalyst, which drives the child to interact with various environmental components [11].

The necessary outcome of childhood is adulthood and play is in this respect an essential intermediary. Through play, the child not only meets his peers, but also, and equally important, adults. For the children, playing has the important function of bringing them closer to the world of adults. Among child psychologists, Henri Wallon has particularly emphasized that the development of children, and thus their becoming adults, goes notably along with their capacity for imitation. Imitation requires a capacity to represent events mentally through the improvement in the distance between imitated and imitator. In the course of the child's development, this capacity will gradually become more sophisticated. Therefore, for the young children exercising imitation is also important for improving their capacity to represent events [12].

Children play in this way after being exposed to new events, because it is important for their development to render less mysterious things, which seem completely strange at first. To gain access to the world of adults, the child must feel that events can be replayed on a scale where he can take his own measure of their meaning. It does not matter whether the playing is plausible according to adult logic, so long as it bears some relation to what the child has observed and helps him in making sense of what he has seen.

IV. STREET PLAY

Street play is a universal cultural phenomenon [13]. Streets fill an especially important role in children's loose-knit social structure by providing a locus for peer contact a few steps from home [14]. Streets and street corners are important meeting places and important ecological places [15] where children meet, learn about each other and their adult neighbors, and investigate their surroundings. Designated playgrounds can add important play opportunities and attract activity, but they cannot substitute for the immediacy of the street. Streets have always been used for close-to-home play; this will surely continue in the future. Although playground may be necessary, it is never to be sufficient. Streets supplies, at least some of the most basic snippet of the community essence that children need to be immersed in, at their will [16].

In traditional societies, the most attractive place for play is the street. Limited finances prevent many parents from providing children with other means of socialization. Residents of urban neighborhoods, particularly children, come to the street with various expectations, lifestyles, and activities. Children move around safely, due to a shared concern and lookout exercised by inhabitants [17]. This implies that the environment is restricted to the child's neighborhood and that it is inhabited by a majority of permanent residents. Thus, people know each other in the sense that most people are able to distinguish a person "familiar" to the neighborhood from a "stranger." This would be a guarantee for the child's autonomous apprenticeship of his environment. Adults would have an eye on children as they move around; parents would know that if something happened to their children there would be someone to help and that they would immediately be notified [18].

In traditional societies, the family and the street are important agents in the education and socialization of children; however, as a result of the reduced extended family in the urban setting of modern cities, children can find their social experience quite limited. Children who live in cities have to rely on their parents' willingness to allow them to visit nearby outdoor play areas.

Children's modern street world are relatively independent from adults, and composed of children from a variety of backgrounds and age groups, which is increasingly being replaced by integration into various peer-group social sets, often chosen and supervised by parents for particular purposes and activities [19]. Consequently, children increasingly are having all of their activities formally organized and timetabled, such that their sense of space and time is dislocated as they are ferried by car from one activity to another. As Buchner has noted, "The spaces in between rush past and are often perceived only superficially, with the result that a child's subjective map becomes a patchwork carpet consisting of islands of apparently unconnected space" [19]. Consequently, young children are no longer producing the street, through performative acts of play, as a children's space. Rather, research suggests that children's street culture is in decline, leaving adults to produce it as an adult space. This change was lamented by many parents, who contrasted their own childhood memories of playing freely outdoors and taking over the streets with their children's more spatially

restricted upbringings.

V. ENVIRONMENTAL COMPLEXITY AND CITY SCALE

On philosophical level, we can redefine Cities in the broad sense as a change over time. But we can trace great difference in the time effect on the traditional cities - as well as slums and villages- more than the planned cities, as traditional cities were mostly more free to evolve, and adapt to different community decisions, which accrued in layers over time. The factor of time, is thus present in its morphology through the intensity of events and defines the degree of urban complexity [20]. The authority of refabricating the environment in traditional cities is producing a city fabric that is in true human scale, with high fractal dimension as fabric morphology occurs over time; land blocks get subdivided, dead-ends emerged, high overhead projections and extra steps in front of doors were often permitted if not obstructing the flow of traffic [20].

Most traditional cities encompass complexity and fractal chaos, the accumulated decisions make hierarchy of streets, less connected to each other and have more dead ends. This makes the fabric resolution of 1m urban details (and less), to offer community a less-integrated internal street fabric (blue lines in Fig. 1) relative to any peripheral highways. The streets get to be much safer in that way to walkers and children playing with a mere occasional supervision.

Fig. 1 Angular Choice Rn (Space Syntax) analysis of Ezbet Bekhit, Cairo, Egypt [21]

Complexity and social involvement in environment are related with two ways: the first is related to time that incomplete figures tend to be more complex than finished figures, because it needs for active completion. Children do not place as much importance on structures provided by institutional agencies as they place on elements created and edited by people of neighborhood themselves.

The second reason is that living thing are the most interesting and noticeable to people [22], so the incomplete urban setting is more exciting or interesting, the richness of urban context appears in the memorable architecture element which shows a "vital urban", so that shops at the street corner are more memorable than a block of tall buildings. Complexity provide a necessary perception of neighborhood

scale. Hence, more people could be able to define their neighborhood thinking of it as home territory [23], [24].

A. Complexity and Child Play

Play is neither boring with too few requirements for ability or desires, nor anxiety provoking with too many [25]. One important way of creating complex environments for children is to provide areas in cities where children can experience new events, which adds greatly to total complexity. The fact that children often do not play in places provided is partly a function of such lack of complexity [26].

The kinds of places which children choose for play in urban areas always tend to be complex. Those play spaces with complexity are open-ended enough to allow for complexity over time [27]. It is clear that in cases like these complexity is related to multiple uses, choice and diversity of activities at one time and over time, spatial variety, many physical elements, varied surfaces, shapes, textures, heights, colors, light and shade, smells, sounds, and materials. Such environments offer interesting analogues for urban design and their effects on children's behavior may well be replicated, if to a lesser extent, in the behavior of adults in the city who are less play oriented and more constrained in their behavior by culture. Yet even children's play is a function of both culture and spaces: streets, to be used, must be seen as appropriate settings [27].

B. Urban Scale

The scale of the environment where the child is free to move, this subject has been hotly debated by urbanists and sociologists since the beginning of this century in discussions about the ideal size of the neighborhood [28]. Neighborhoods surpassing a certain size, will no longer permit shared concern and attention for children's safety. Now, this might even be the case in neighborhoods with well-defined limits. If the planning of such urban areas has not taken public spaces and other places favoring encounters into consideration, then it will be difficult for any kind of shared social life to develop.

C. Neighborhood and Child Identity

Neighborhood space reflects the gradual construction of the child's identity, achieved also between the two polarities of dependence versus autonomy, and closeness versus distance. Thus, the child will do things with others and will have the chance to encounter other children. This meeting with his peers is important for building the feeling of belonging to a group, a team, of sharing in a destiny, of collective feeling. Identity affirms itself in confrontation with others, sometimes by way of experiencing closeness and complicity or membership, sometimes distance, differentiation or even stranger-hood. These confrontations take place when there is occasion to observe, compare and express one-self, all the while doing something with others. These inner confrontations between myself and my perception of the other are components in the construction and affirmation of our identity. Thus spatially delimited high points have in common the power to relate each person to a story linked to the folk ways of the neighborhood or/often and more generally, to the

customs of a culture. Its spatial characteristics are thus very important although users may only be there for short periods or instants at a time. However, the story of a place and the way it is used over time become a "set of instructions" for such places: who-ever uses or acquires it knows the appropriate gestures, attitudes and behaviors [29]. Everyone can write his own "variation on the theme," but the theme is given. And that is important because in such a place it gives equal assurance, or face, to everyone. It is only when the feeling of mastering a place reaches a certain threshold that it lends support to identity. If this threshold is not reached, if the person has no clue to the "signs" of the place, he will be overrun by impressions. Finding no signposts, he will not be able to build either memory or identity.

VI. CONCLUSION

The paper has highlighted the role of play in child development, and how the urban fabric of the city, the neighborhood in specific, affects the behavioral setting in which the child plays that accordingly affects his behavior. The environment in itself is not the original reason for this behavioral setting, but the way people shape their environment, which creates a socializing medium that gives children ideas about the spaces and affecting their perception of environments.

Children's environmental perception gains their levels of spatial awareness through the level of control of adults on spaces. In modern cities, the act of conscious control and design of the environment is the leading phenomena. It has emphasis on individuality and independence. It attempts to design childhood experience with neat perfection and high safety standards, in a way that cripples child's growth itself, and impair his innate nature to explore and seek adulthood.

Also the passiveness in social interactions due to segregated lifestyle causes lack of awareness to the child perception to his own environment that is clearly expressed by the child's withdrawal and effort to bond to familiar and mainly human element in that foreign setting.

REFERENCES

[1] Aries, P., 1962, *Centuries of Childhood: A Social History of Family Life*. New York: Random House.

[2] Hendrick, Harry, 1990, *Constructing and reconstructions of British childhood:* An interpretive survey, 1800 to present. In Alison James and Alan Prout, editors, Constructing and Reconstructing Childhood: Contemporary Issues in the Sociological Study of Children, Basingstoke, UK: Falmer Press

[3] Kugelberg, C. (1999), *Perceiving Motherhood and Fatherhood: Swedish Working Parents with Young Children*. PhD thesis. Uppsala: Universoty of Uppsala.

[4] Tranter, P., Pawson, E., 2001. *Children's access to local environments: a case-study of Christchurch, New Zealand*. Local Environment 6 (1), 27–48.

[5] Hillman, M., 2006. *Children's rights and adults' wrongs*. Children's Geographies 4 (1), 61–67.

[6] Tandy, C., 1999. *Children's diminishing play space: a study of inter-generational change in children's use of their neighbourhoods*. Australian Geographical Studies 37 (2), 154–164.

[7] Karsten, L., 2005. *It all used to be better? Different generations on continuity and change in urban children's daily use of space*. Children's Geographies 3 (3), 275–290.

[8] Parr, A.E. (1967), '*The Child in the City: Urbanity and the Urban Scene*', Landscape, 16 (33): 3–5.

[9] Noschis, K. (1992). *The inner child and the city*. Architecture & Comportement/Architecture & Behaviour, 8 (1),4 9-58.

[10] Erickson, E. "*Play and Activity*," in M.W. Piers (ed.), Play and Development (Norton, 1972).

[11] Grabow, Stephen and Niel J. Salkind. "*The Hidden Structure of Children's Play in an Urban Environment.*" EDRA7/1976. Vol. 1, pp. 164-171.

[12] PIAGET, J. *Play, Dreams, and Imitation in Childhood* (Norton, 1962).

[13] Appleyard, D. (1981). *Livable streets*. Berkeley: University of California Press.

[14] Andrews, H. (1973). *Home range and urban knowledge of school-age children*. Environment and Behavior, 5, 73-84.

[15] Carr, S., & Lynch, K. (1970). *Where learning happens*. In M. Meyerson (Ed.), The conscience of the city. New York: George Braziller.

[16] Abu-Ghazzeh, T. M. (1998). *Children's use of the street as a playground in Abu-Nuseir, Jordan*. Environment and Behavior, 30(6), 799(33).

[17] Buchner, P., 1990, *Growing up in the eighties: Changes in the social biography of childhood in the FRG*. In L. Chisholm, P. Buchner, H.H.

[18] Hamouche, M. B. (n.d.). *Can Chaos Theory Explain Complexity in Urban Fabric? Applications in Traditional Muslim Settlements*. Nexus Network Journal, 11, 217-217-242.

[19] Rosenberg, S. (1980). Vivre dans son quarti, quand meme Annales de la Recherche Urbaine,9,5 5-75.

[20] Kaj N., *Child Development Theory and Planning for Neighbourhood Play:* Children's Environments, Vol. 9, No. 2, Children's Changing Access to Public Places (1992), pp. 3-9.

[21] Abdelbaseer A. M., N. Mohareb, "*Social networks in space of unplanned settlements in Cairo metropolitan area*" in Proceedings of the 10th International Space Syntax Symposium, 2015, p. 134:5.

[22] Bartlett, Sir Frederick (1967) *Remembering*, Cambridge Press (paperback) (originally published 1932).

[23] Alexander, C. (1965) "*A City is Not a Tree*", 122, No. 1, pages 58-61 and No. 2, pages 58-62. Edited by J. Thackara, Thames and Hudson, London (1988) pp. 67-84.

[24] Rapoport, A. (1977). *Human Aspects of Urban Form* (Vol. 15, Urban and regional planning series). Pergamon Press.

[25] Csikszentmihalyi, M. and S. Bennett (1971) "*An exploratory model of play*," American Anthropologist, vol. 7 3, No. 1 (Feb.), pp. 42-58.

[26] Rapoport, A. (1969(b)) "*Housing and housing densities in France*," Town Planning Review, vol. 39, No.4 (Jan.), pp. 341-354.

[27] Moore, Robin (1966) "*An experiment in playground design*," MCRP Thesis MIT (Nov.) (unpublished).

[28] Perry, C. A. (1929). *The neighbourhood unit. In Regional plan of New York and its environs: Neighbourhood and community planning*. New York: Regional Plan Association.

[29] Barker, R. G. (1968). *Ecological psychology*. Stanford: Stanford University Press.