

住民의 立場에서 본 都市 公園綠地의 役割에 關한 研究*

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The Role of Urban Green Space in terms of Popular Values

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요 약

公園綠地가 都市內에서 수행하고 있는 役割에 대해 학자들은 크게 '住民을 위한 慰樂空間으로서의 役割' '都市構造를 이루는 한 要素로서의 役割' 그리고 '都市 生態系의 基盤으로서의 役割' 등 크게 세가지로 區分하고 있다.

본 연구는 大都市 주민들이 인식하고 있는 都市公園綠地의 役割을 그들의 利用과 價値觀을 중심으로 說問調査에 기초한 結果의 일부이다.

調査에 의하면, 주민들은 대개 公園綠地를 그들의 慰樂空間을 위한 場所로서 인식하고 그 役割에 동의하고 있는 것으로 나타났다. 최근, 都市·造景計劃分野에서 크게 논의되고 있는 生態學的 概念에 근거한 都市公園綠地의 '都市內 自然'으로서의 役割에 대한 住民의 認識이 전문가들의 열의에 비해 많이 높지 않음을 보여 주었다. 그러나 이는 慰樂空間으로서 役割 다음으로 중요도가 認識되고 있는 만큼 都市內 自然으로서의 公園綠地 役割을 높이기 위해서 학자들 사이에 구체적인 논의와 실증적인 연구가 뒤따라야 할 뿐만 아니라 住民들의 意思와 合意가 있어야 할 것으로 생각된다.

한편 都市公園綠地의 役割에 대해서는 都市住民의 社會적인 變수 특히 性, 教育水準, 賃金水準 등에 따라 차이가 있는 것으로 나타나 都市公園綠地 計劃時 이들 變수에 대한 고려가 있어야 할 것이다.

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1. Introduction

There is evidence that changing social and economic factors may be changing people's attitudes and values towards their natural and urban environment (Laurie, 1979; Walker and Duffield, 1983; Cranz, 1982; Cooper-Marcus, 1990).

Recently, the growing demand for a good quality of life has brought to the surface a deep concern for the natural environment in Korean cities. This has been related to this country's democratic transition and to changing social and economic conditions such as more leisure time, better incomes, greater mobility and a higher standard of education.

This situation is similar elsewhere, for according to Dower(1965) the desire and opportunity to use leisure time are being profoundly influenced by growth of income, of mobility and of education. In addition, Whitaker and Brown(1971) stated that the need for public urban open space is increasing, together with the rises in longevity, mobility and leisure of the growing proportion of people who live in urban areas. However, local people's different values and attitudes towards urban green spaces are varied and complicated to measure, because, in our society, people have many different meanings for green space in cities, and therefore have different needs in relation to experiencing nature.

Foresta(1980, 1981), from work under-

taken in the United States argued that open space pluralism is one of the prevailing ideas associated with any consideration of public urban open space. He identified that people valued green space for different reasons according to social group, educational level, family income, and residential area. However, he also showed that there was a high level of agreement about the value of green space across lines of class, urbanisation, income, and race. The similarities are far more striking than the differences. In terms of the differences, the study, which was based on the Eagleton Institute's New Jersey Poll, points out that poor or poorly educated people have a greater concern for the social and recreation-intensive uses of green space, whilst the high-income and educated elite were concerned about nature and the more aesthetic uses of green space. The study did, however, conclude that the nature-based of green space are in general the most valued by the state's local people.

In the U.K, Burgess, Harrison and Limb study(1988) in the London Borough of Greenwich explored valuing green space for its natural aspects, was a common idea amongst the local people regardless of their social class, income or residential circumstances. However, the appreciation of the role of green spaces differ from person to person; "for isolated mothers to meet others and escape the burdens of being cooped up with young children for a while; for youngsters to explore and have adventures; for adults and adolescents to engage in

sports and active, recreational activities; for extended families or a few friends to drink tea together in the park.; for the elderly to sit and watch the world go by on a warm afternoon” (Burgess, Harrison and Limb, 1988, p.462)

Recently, McNally(1990) examined the residents' different values and perception of wildland landscape in Northern California. McNally interviewed residents of six communities with regard to geographic locations, socio-economic and ethnic profiles. The participants was asked as part of the interview to express the two most valued outdoor places in their local community. The study identified that the types of places varied significantly between the community groups' and the above profile.

In order to appraise the changing concepts of urban green space as it might be determined by people's uses and needs, therefore, this study aims to identify people's changing values towards green space with regard to socio-economic variables, such as gender, age, occupation, residential area, income and "childhood residence". More specifically, it explores the most important role of green space with regard to contemporary local people's values of green space in Taegu city

2. The Roles of Green Space

The following section presents a brief outline of the most important roles of green space in cities, by looking at the

contributions, various authors have made to the discussion of the recreation and amenity, visual and urban form structuring, and nature and ecological role of green space in relation to various open space functions.

2.1 Recreational and Amenity Role of Green Space

It seems that one of the major roles of green space in cities is the recreational-amenity role. Broadly speaking, it is probable that the recreational role of open space includes aesthetic and psychological roles with regard to passive recreational activities, such as viewing natural scenery and relaxing. It is Gold(1980) who deals with recreational aspects of green space. In particular, he explored the relationship between outdoor recreation and open space with respect to human biological needs as well as psychological needs. According to him, "The relationship of outdoor recreation to open space is based on a biological needs to retain some association with the natural environment in an urban setting, on a psychological need for contrast and change in special surroundings, and activities that most indoor environments do not provide. When these needs are linked with the routine jobs of most people and the sterile or stressful outdoor environments of many cities and suburbs, they generate strong desire for escape to open space, especially those with a natural character. This desire is why many people seek recreation opportunities in regional parks... or private resorts. The desires to experience open space also explains why

many large urban parks with a natural character are heavily used and essential to those without the means to leave cities for this type of recreation experience" (Gold, 1980, p.32). He stresses that open space in cities provides a place where people can experience freedom, diversity, self-expression, challenge or enrichment. In addition, Balmer emphasised both the recreational and amenity roles of green space. He assumed that the recreational function of open space includes not only activity itself but also a psychological perception of space. Balmer asserted that "... 'recreation', in its broad sense, can include any activity that man indulges in to 're-creat' himself, seeking relief from normal routine. The term commonly connotes a conscious use of leisure time involving a range of activities from watching television to climbing mountains. In this sense, the use of parks and other open spaces within the city is obviously recreation. However, there is another form of open space use that is perhaps equally important. Perception of space, the mere sight can offer respite, relief, and satisfaction to individual that is recreation in every sense of the world. This amenity function does not necessitate a physical visit to the site ; in fact it may not even require visual contact. the knowledge that space and greenery form a part of the individual's urban territory may be sufficient to satisfy a wide range of social, emotional, and psychological needs that have often been discussed but never be adequately quantified" (Balmer, 1972, p2). According to Balmer's points of view, in its broad sense, it seems that open space plays important

roles not only for active recreation which recreation which involves psychological well-being and but also for aesthetic benefits.

Balmer's view of the role of green space in relation to psychological function is well described by environmental psychologists or aesthetes. For example, Nohl explored the symbolic-aesthetic character of green space in terms of aesthetics. According to him, open space in the city is a symbol of nature so that it provides an oasis for urban people. He stated that "If we ask people why they like open spaces in cities, sooner or later they answer that a park, for example, is a counterworld of the almost completely built urban environment; as such, it is a symbol of nature... People associate a multitude of qualities with nature, including health, peace, loneliness, freedom and originality. In our society, we have many meanings for nature, and therefore each of us has different needs for experiencing nature. But one interpretation of nature is especially relevant to the creation of a nature aesthetic" (Nohl, 1985, p.36)

Due to its symbolic character, green space is making contributions as major recreational places for people's emotional benefits and natural aesthetics. The author believes that open space contributes to provide natural setting for people's passive recreational activities, such as viewing natural scenery and setting. Those activities are, on the other hand, deeply related to people's desire to be in contact with nature in cities for psychological satisfaction.

2.2 Visual and urban structural role of green space

Green spaces have always been recognised as an important visual and structural element of cities by society. As Chadwick(1966) explained, urban open space is not a phenomenon of the nineteenth century; it has been a part of the urban fabric from the earliest times, such as the sacred groves of Athens and pastoral parks of the nineteenth century industrial city.

It is probable that urban green spaces are a complement and foil to urban form and, therefore, they play a central role in enhancing the visual quality of the city; in other words 'the apparent clearness' or legibility (Lynch, 1960). According to Lynch, "a legible city would be one whose districts or landmarks or pathways are easily identifiable and are easily grouped into an over-all pattern" (Lynch, 1960, p.3). Over 30 years ago, Lynch conducted a study of what people mentally extract from the physical reality of a city. He reported the results in a book called *The Image of the City*, and his findings are a major contribution to our understanding of urban form and the components of that form. Lynch offered five elements of urban form that enhance the identity and structure of a city: its imageability. Lynch argued that "(imageability is) quality in a physical object which gives it a high probability of evoking a strong image in any given observer. It is that shape, colour, or arrangement which facilitates the making of vividly identified, powerfully

structured, highly useful mental images of the environment" (Lynch, 1960, p.9). The five elements are;

1) Paths: The routes along which people travel. The footpaths of a university campus are pathways for the campus.

2) Districts: A city is composed of component neighbourhoods or districts: its center, its residential areas, factory areas, suburbs, university campuses etc.

3) Edges: The termination of a district is its edge, such as cliffs or escarpment or the shores of rivers, lakes, or oceans.

4) Landmarks: Easily viewed elements, either on a grand scale, like the tallest building in town, or on a smaller scale, like a statue or unique storefront, which help people to orient themselves in the city and help identify an area.

5) Nodes: A node is a center of activity. Actually it is a type of landmark but is distinguished from a landmark by virtue of its active function.

It is Gold who developed Lynch's idea of the five elements of the city in relation to open space. Gold(1980) suggested that the well planned green space enhances people's perception of the city. In addition, he asserted that well planned open space is the most important element which shapes and complements urban form with respect to its imageability. According to him, "Open space can be the structural framework of a city to produce edges, focuses, nodes, districts, and regions of different size, scale, and character. The opportunity to experience an architectural element from the vantage point of open

space is a unique visual quality. No single element can better shape and compliment urban form than well-placed open space. Its ability to differentiate, integrate, or buffer different types of land use or activities is unsurpassed. Sensitively designed open space can give people a sense of identity and territoriality. It can define urban form and limit the physical size, shape, or density of a city or neighbourhood" (Gold, 1980, p. 32).

It is probable that green space defines the edge of the urban area, and separates the character of individual communities so that it gives local people a sense of identity and territoriality. In addition, it plays an important visual and urban structural role which enables local residents to build mental image of their immediate surroundings (LPAC, 1992, p. 147).

2.3 Natural and ecological role of green space

During the last decades, rapid growth due to industrialisation has destroyed the balance of natural processes and, consequently, the quality of natural and urban landscapes. It has also endangered man's health through reducing the capacity of the natural environment to cope with pollution of various types. For many years, the potential contribution of nature in cities to people's everyday life has been unrecognised and the advantages of contact with nature forfeited. Recently, however, the importance of open space in cities has been strongly supported by landscape ecologists

due to its ecological function.

Ecological function of open space is largely advocated by the philosophy of Ian McHarg (1964), followed by Laurie (1979), Hough (1984) and Spirn (1984). They suggested that land use allocation should be determined by the pattern of natural resources and individual ecological elements, such as geology, climate, water, soil, topography, slope, vegetation and wildlife. Hence, Hough (1984) argued that "The application of the 'Design with Nature' philosophy has become, to a growing body of practice, an accepted basis for land planning and management of natural resources. It concerns every landscape where human goals are in actual or potential confrontation with natural process" (Hough, 1984, p. 5). They commonly stress the vital role of green space in cities as a basis for an urban ecosystem in order to improve the quality of the urban environment. In addition, they commonly value open space as nature in cities.

It was Manning who described nature as the entire diverse community of living things on the planet which also includes the physical environment upon which the community depends, and the unseen network of subtle forces and relationships which lie behind the surface appearances of both the organic and the inorganic world (Manning, 1979, p. 3).

Nohl also argues that "Nature represents the material basis of all human life... Man's dominance over nature should not be allowed to mean its

destruction, instead it must depend rather on the recognition of the laws which govern nature and making use of it within the limits of their jurisdiction and with regard to its consevation and future use. As the basis for human life, nature is invested with vital utilitarian significance. ... On the other hand, man and all other living creatures are biologically and psychologically adapted to the natural conditions prevailing within their natural habitats. At the same time nature provides man with optimum living conditions. Therefore nature also has a vital-ecological meaning for man" (Nohl, 1981, p.886)

It seems that "nature" in this context describes the human habitat as part of an ecosystem which includes the natural environmant.

The movement for "nature in the City" reflects current social goals, ideology about order, and underlying values and attitude toward the city.

Nicholson-Lord(1987), meanwhile, declared that "ecology offered a clarification of that curiously opaque principle of eighteen-century landscape design known as genius loci, spirit of place. A particular place, ecology says, has its own geology, climate, topography, flora and fauna. This forms, in Ian McHarg's phrase, its 'landscape identity'. But it also has a human history: man has used it as his own habitat. Its genius loci is the sum total of these associations" (Nicholson-Lord, 1987, p.115). According to Noberg-Schulz(1984), "Genius loci is a Roman

concept... every 'independent' being has its genius, its guardian spirit. The spirit gives life to people and places, accompanies them from birth to death, and determines their character or essence... ancient man experienced his environment as consisting of definite characters. In particular he recognized that it is of great existential importance to come to terms with the genius of the locality where his life takes place" (Norberg-Schulz, 1984, p.18). Thus, each particular place has its own geology, climate, water, soil, topology, slope, flora and fauna which together determines its ecology so called genius loci. In order to be a good natural environment for the provision of man's optimum living conditions we should take care of the specific character of space.

It is certain that green space in cities plays an important role not only as nature in cities but also as a basis for urban ecological processes which are able to sustain cities' landscape character.

3. The Survey

3.1 The population

It was Yeomans(1968) who suggested that a population is 'every member of a group possessing the same basic and defined characteristics, but varying in amount or quality from one member to another'. Simply, all the members of a group are called a population. The sample design, therefore, was based on the population: 'the local residents in Taegu city'. The sample was designed

according to the major principles which underlie all sample selection: the desire to avoid bias in the sample selection procedure and to achieve a broad sample of sufficient size, which reflects the population(Moser and Kalton, 1971).

Following the two pilot stages, the survey in Sheffield and Taegu, the main survey was carried out by 110 Landscape students of Kyongbuk National University as well as the author from 5th of June to 11th of July 1991.

3.2 The analysis

In all, 522 residents took part in the survey out of a total of 761 distributed questionnaires, giving a 70 percent response rate. This achievement is partly attributable to the residents' enthusiasm and concern about the quality of the urban environment in Taegu.

A total of 505 questionnaires were selected for the statistical analysis. The remaining 17 questionnaires were not completed seriously and were therefore excluded. The sample size was sufficiently large to allow valid generalisations to be made from the survey results. The SPSS (Statistical Package for the Social Sciences) program was used mainly for the analysis of the raw data. Chi-square analysis was mainly used for the study.

4. Values for Green Space

4.1 The Most important role of green space

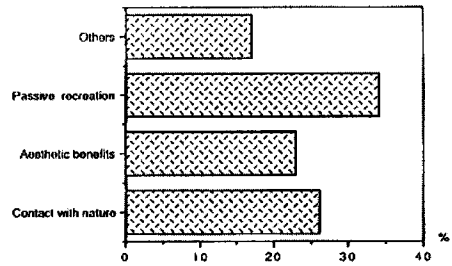


Figure 1. Proportions of local people's values for green space(N=502)

The reasons for valuing green space falls into four categories; contact with nature ('to breathe fresh air' and 'to watch birds and animals'), passive recreation ('to feel free from city life' and 'to find a tranquil place'), aesthetic benefits ('to view natural scenery'), others ('to play sports & games', 'to meet people' and 'to play with children for outdoor education'). Of these, as Figure1 shows, the most commonly valued character of green space is as a place for "passive recreation".

4.2 Impact of gender on the perception of the role of green space

As Table 1 indicates, the values between men and women are significantly different ($p < 0.05$). The male group valued highly contact with nature more than women group, while aesthetic benefits for women were more highly appreciated value than men.

It seems probable according to Franck and Paxson(1989) that these value differences are due to the different socialization between men and women and women's restricted mobility. Franck

Table 1. Value of familiar green space by gender¹⁾

Values	Unit: Person (%)		
	Male	Female	Totals
Contact with nature	72(30)	58(22)	130(26)
Aesthetic benefits	45(19)	71(27)	116(23)
Passive recreation	86(36)	85(32)	171(34)
Others	35(15)	50(19)	85(17)
Totals	238(100)	264(100)	502(100)

*Chi-Square=8.66482 D.F.=3 (p<0.05)

and Paxson (1989) argued that "From an early age, girls are encouraged to be less exploratory, more fearful, and less physically active than boys" (Franck and Paxson, 1989, p.127). Therefore, the women's group's value for green space, such as its aesthetic benefits is less likely to involve active use of green space such as 'playing sports and games'. In addition, fear of crime discouraged the female group in finding tranquil places in the green space so they highly valued the aesthetic benefits of green space, such as 'viewing natural scenery'²⁾. In the case of the male group, the most highly appreciated value, such as passive recreation (that is 'to free from city life' and 'to find a tranquil place') matches the motivations for use such as 'to find peace and quiet'.

4.3 Impact of age and occupation on the perception of the role of green space

The value the older age group placed on the role of green space, as shown

by Table2, was mainly based on the natural character of green space. The teenage group most valued the passive recreational benefits of green space. The age between 30 and 40 valued the other values, such as playing sports and games, meeting people and playing with children more than other age groups. Thus, the older-aged group showed an appreciation of the green space which enabled them to have contact with nature. Whereas, the young age group's concept of green space is as a passive recreational benefits which offers "restorative experience" (Kaplan, 1984; Kaplan and Kaplan, 1989). There are significant green space value differences between age groups (p<0.001).

Table 2. Value of familiar green space by age group*

Values	Unit: Person (%)				
	15-20	20-30	30-40	40-65	Totals
Contact with nature	8(7)	24(20)	41(36)	58(39)	131(26)
Aesthetic benefits	31(25)	25(21)	27(24)	33(22)	116(23)
Passive recreation	63(52)	50(42)	24(21)	34(23)	171(34)
Others	20(16)	20(17)	21(19)	24(16)	85(17)
Totals	122(100)	119(100)	113(100)	149(100)	503(100)

*Chi-Square=58.57811 D.F.=9 (P<0.001)

Table3 shows that, overall, the non-manual worker group tended to value nature-based use more than the others. The housewives most valued use of aesthetic benefits was rather high compared with other occupation groups. This value of green space well matched

1. According to Acher and Lloyd, "the term gender is being used when referring to socially derived distinctions, leaving the term sex for biological differences" (Archer and Lloyd, 1989, vii).
2. It seems, as Hennessey (1975) pointed out, that "people tend to give the socially proper of respectable answer to a question even if it means lying about what they really think" (Hennessey, 1975, quoted from Foresta, 1981, p.130)

the female group's value of green space discussed above. The university and high school student groups, like the younger age group, mainly used green space in order to enjoy passive recreational benefits. The values of green space differ from occupation to occupation, which shows statistical significances ($p < 0.001$).

Table 3. Value of familiar green space by occupation*

Values	Unit: Person (%)					
	NMW	MW	HW	US	HS	Totals
Contact with nature	38(44)	18(31)	30(27)	10(13)	6(6)	102(23)
Aesthetic benefits	14(16)	11(18)	32(29)	15(18)	26(26)	98(22)
Passive recreation	20(23)	20(33)	26(23)	42(51)	51(52)	159(36)
Others	15(17)	11(18)	23(21)	15(18)	16(16)	80(19)
Totals	87(100)	60(100)	111(100)	82(100)	99(100)	439(100)

*Chi-Square=61.22502 D. F.=12 (P<0.001)

4.4 Impact of area of residence on the perception of the role of green space

Table4 demonstrates that relatively important green space uses of the different residential areas were:

- (a) natural settings for the people of Chung-Gu, Nam-Gu and Talso-Gu,
- (b) aesthetic benefits for the people of Tong-Gu, Puk-Gu and Susong-Gu,
- (c) passive recreational place for the people of So-Gu and Susong-Gu, and
- (d) other benefits, such as active recreation and the educational role for the people of Chung-Gu and Tong-Gu.

It is interesting to note that the

most urbanised Chung-Gu residents valued the green space role for child-education and active recreation, more highly than the residents of other areas, whilst the residents of Nam-Gu, where Ap'san Park is located, appear to appreciate most the nature-based character of green space. Generally speaking, the data indicates that the most commonly valued role of green space in each district are deeply related to the character of local people's residential environments. Like other variables, such as gender, age and occupation green space values differ according to different residential areas ($p < 0.05$).

Table 4. Value of green space by residential area*

Values	Unit: Person (%)							
	ChungTong	So	Nam Puk	SusongTalso	Totals			
Contact with nature	24(34)	8(18)	19(26)	21(36)	27(24)	15(19)	15(34)	129(26)
Aesthetic benefits	13(18)	16(35)	10(13)	11(19)	32(28)	24(29)	8(18)	114(23)
Passive recreation	20(28)	10(21)	35(47)	17(29)	36(32)	35(42)	14(31)	167(34)
Others	15(21)	12(26)	11(15)	10(17)	19(17)	9(18)	9(11)	84(18)
Totals	72(100)	46(100)	75(100)	59(100)	114(100)	83(100)	45(100)	494(100)

*Chi-Square=31.95813 D. F.=18 (P<0.05)

4.5 Impact of educational attainment and income on the perception of the role of green space

Table5 exhibits the relationship between the highly-educated group and use of green space for its passive recreational benefits³⁾. It is probable that highly educated people are likely to be

3. This is not borne out through by Table 3 where non-manual worker scored low on 'passive recreation'. However, as Table 5 shows, highly-educated people scored highly under this category. It seems that this is partly due to the inclusion of the "university student" amongst the highly-educated group. This illustrates that there is no significant relationship between educational attainment (e.g. highly-educated group) and occupation (e.g. non-manual group) in Korea.

following the old Korean elite's attitude to nature. It is often argued that appreciation of natural places for passive recreational uses by the literati has long been a tradition of the upper ruling class in Korea (Choe, 1989; Min, 1992; Jung, 1992). The less educated seem to put a higher value on the availability of natural setting, which probable reflects that green space provide the only place for the these people to have contact with nature in the city. There are significant differences between educational level and values for green space ($p < 0.01$).

Table 5. Values of familiar green space by educational level*

Values	Unit: Person (%)			
	Middle	High	College	Totals
Contact with nature	28 (45)	46 (20)	55 (26)	129 (26)
Aesthetic benefits	14 (22)	57 (25)	45 (22)	116 (23)
Passive recreation	9 (14)	84 (37)	77 (37)	170 (34)
Others	12 (19)	41 (18)	31 (15)	84 (17)
Totals	63 (100)	228 (100)	208 (100)	499 (100)

*Chi-Square=20.96251

D. F. =6 (P<0.01)

Table 6. Values of familiar green space by income*

Values	Unit: Person (%)				
	Lower	Lower M.	Middle	Upper M.	Totals
Contact with nature	14 (22)	65 (31)	36 (24)	10 (22)	125 (27)
Aesthetic benefits	17 (27)	50 (24)	32 (21)	6 (13)	105 (22)
Passive recreation	21 (33)	64 (31)	53 (34)	21 (47)	159 (34)
Others	12 (18)	29 (14)	33 (21)	8 (18)	81 (17)
Totals	63 (100)	208 (100)	154 (100)	45 (100)	470 (100)

*Chi-Square=11.42725

D. F. =9 (P<0.3)

Table 6 indicates that there was little overall differences of value of green space from one income group to another ($p < 0.3$), except the role of green space for passive recreation. All the income groups unlike the study by Foresta (1980), appreciated the passive recreational benefits provided by the green

space, rather than the nature-based character of green space. Only the lower middle income group valued the natural character of green space (31%) as much as the value of passive recreational character of green space (31%). The upper middle income group, highly educated people, valued the passive recreational role of green space whereas, lower middle income group, like the less educated group, supported the role of the natural setting to fulfill its contact with nature.

4.6 Impact of "childhood residence" on the perception of the role green space

Cooper Marcus (1978) examined how the settings of the past affect current environmental preferences and values using environmental autobiographies from a class of students. According to her analysis, children growing up in the city or country mostly described environments similar to those of their childhood when asked to express the ideal environment, whilst very few suburban-raised children chose a suburban locale.

This subsection, therefore, identifies whether the characteristics of childhood residences affect the values later given to green space. As Table 7 exhibits, the data shows some significant differences of green spaces values in relation to childhood places, as well as the statistical result ($p < 0.01$), supporting the Cooper Marcus findings (1978).

Table 7. Values of familiar green by childhood residence*

Values	Unit: Person (%)		
	Urban	Country	Totals
Contact with nature	63(21)	67(34)	130(26)
Aesthetic benefits	71(24)	44(22)	115(23)
Passive recreation	117(39)	52(27)	169(34)
Others	50(16)	34(17)	84(17)
Totals	301(100)	197(100)	498(100)

*Chi-Square=13.37423

D. F. =3 (p<0.01)

Local people, whose upbringing place was urban, valued the passive recreational role of green space, whilst the people who spent their childhood in the country, like the older-age group, non-manual workers, Nam-Gu residents, the less educated and lower middle income group appreciated the green space as a natural settings to keep contact with nature. It seems that the recreational roles are of greater importance to urban residents than countryside inhabitants. Hence, the data confirms that values and preferences are influenced greatly by the settings of the "childhood residence".

5. Conclusions

People most valued the passive recreation (to feel from city life and to find a tranquil place) of green space. This was followed by the value they put on contact with nature benefits (to breathe fresh air and to watch birds and animals) and aesthetic benefits of green spaces (to view natural scenery). This reflects that in order to meet people's requirements, green space planning, design and management should consider, not only the recreation-amenity aspect of

green spaces but also natural and ecological aspect of green space in cities.

These values suggest that urban green space in Taegu play an important role in people's everyday lives, not only as an urban oasis in inner city for passive recreation and amenity, but also as urban nature where people breathe fresh air and children watch birds and animals. Consequently, green space may be seen as having valuable passive recreation-amenity purpose in terms of Taegu residents. However, this evaluation of the purpose of green space does not wholly support the ideas of environmentalists(Laurie, 1979; Dower, 1984; Fraser, 1984; Hough, 1984; Spirn, 1984) who argued that "contact with natural areas affords people a range of personal, social and cultural benefits as well as opportunities to learn about ecology" (Burgess, et al, 1988, p.456); for people in Taegu still regard urban green space as the best place for passive recreation and amenity rather than as a nature reserve. It is very doubtful how many people would understand a whole new and popular theory of design based on ecological awareness such as begins to exist in Western countries. In reality, this ecology-based design theory is a new field for the Korean landscape and urban designer and a way forward which integrates ecology into design within urban areas rather than others to predominate probably to be developed.

Values placed on green spaces differ according to people's socio-economic characteristics, such as age, occupation, residential area, educational

level, household income and 'childhood residence'. These findings identified that socio-economic factors affect local people's perception of the role of green space. The urban green space planners should bear in mind these are the use of green space factors in relation to the planning, design and management of the green space in the city.

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