

On Human Needs

Hwang Keewon*

CONTENTS

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|--|-------------------------|
| I. Human Needs as a Prime Urban Design Criterion | IV. For WHOM? |
| II. WHAT are the Human Needs? | V. HOW for human needs? |
| III. WHY human needs? | VI. Afterthoughts |

I. Human Needs as a Prime Urban Design Criterion

Generally, the identification of competent 'criteria'⁽¹⁾ is one of the most important procedures in the course of all human activities which involve decision-making or judgments.⁽²⁾ This is especially true when involved decisionmaking is critical in light of the magnitude of mobilized resources, the complexity of interest groups, and the consequences which are not easily changeable or reversible due to inertia or causality.

It is the same with the urban design, which, needless to say, calls for a lot of decision-making on the shape and quality of the urban environment, whether based on the normative or descriptive approach.⁽³⁾ Furthermore, it is very difficult to alter once-built urban environment due to the inertia of the involved human activities and the environment *per se*. Also, we might consider the fact that urban design is not an 'once and for all activity,'⁽⁴⁾ but is continuous or sometimes the result of prior causes. Therefore, "it is impossible to design anything well without them [criteria]," and by and large, "it will be better if

* Full-time Lecturer, Dept. of Landscape Architecture, GSES, SNU.

(1) Criteria are "standards on which a judgment or decision may be based." Also, standards are "some measure, principle, model, etc. with which things of the same class are compared in order to determine their quantity, value, quality, etc." Richard Toth, "CRITERIA in Land Planning and Design," *Landscape Architecture*: Oct. 1971, p. 43.

(2) *Webster's Third New International Dictionary*, 1961 ed., s.v. "Criterion."

(3) The 'normative' approach focuses on the desirable future conditions so that it inevitably calls for decisions to make normative statements or a declaration of what is desired. Although 'descriptive' approach reacts to probable future conditions, decision-making is asked not to allow projections to become self-fulfilling prophecies. See, N. Dee, et al., "Designing to meet Human Needs," *Ekistics*(240):Nov. 1975, pp. 315-321 passim.

(4) Paul D. Spreiregen(ed.), *The Modern Metropolis: Selected Essays by Hans Blumenfeld*(Cambridge: The M.I.T. Press, 1967), p. 246.

they [criteria] are reached as a result of an orderly and logical process.”⁽⁵⁾

Then, how can we develop a set of reasonable and competent criteria for the urban design activities? As John Dewey said that “ends controls the process of thinking,”⁽⁶⁾ our search can start with the consideration of the ends or the objectives of the urban design: this seems reasonable in view of the fact that “to understand how and why their criteria become criteria in the first place is important to develop criteria.”⁽⁷⁾

Recently along with a growing introspection and re-evaluation of our man-made environment of which quality and form have been shaped mainly by the mechanical world view since nineteenth century,⁽⁸⁾ there seems to emerge a new awareness of the importance of ‘human needs’ as one of the most important criteria in the design field, which might best be expressed by C.A. Doxiadis’ conception of ‘anthropopolis’ or ‘city for human development.’⁽⁹⁾ Man as human being rather than mechanic being—a mere part of the ‘megamachine’—become regarded once again as the legitimate objective of design and planning, as it was and it has to be.

In this line of inquiry, there seems to exist at least three different study groups: scientists in the field of psychology, sociology, human ecology, anthropology, etc., who pursue the general man-environment relationship; intellectual thinkers like Lewis Mumford, Rene Dubos, who provide a philosophical framework; and designers and planners in the practice, who seek by and large project-oriented solutions. However, a lack of strong linkages to integrate these three groups is an obstacle to a purposeful theory building.⁽¹⁰⁾

Spelling out what is all about ‘human needs’ as one of the most important criteria in contemporary urban design is the thesis of this paper. At least four questions are conceivable in relation to this thesis: (1) WHAT are the human needs?; (2) WHY are the human needs so important?; (3) For WHOM, or WHOSE human needs should be served?; and (4) HOW are the human needs served?

(5) Richard Toth, *op. cit.*, p. 43.

(6) John Dewey, *How We Think* (Boston: Heath, 1910), p. 12, quoted in Francis Ferguson, *Architecture, Cities and the Systems Approach* (New York: George Braziller, 1975), p. 8.

(7) Richard Toth, *op. cit.*, p. 44.

(8) See chapter III of this paper.

(9) C.A. Doxiadis, *Anthropopolis: City for Human Development* (New York: W.W. Norton, 1974)

(10) A number of partial equivalents are available for the term ‘human needs.’: ‘environmental psychology’ is for the research aspects, while ‘human needs,’ ‘user needs,’ or ‘social and behavioral factors,’ are for the applied aspects. ‘Environment-behavior studies’ is the encompassing designation. Gary T. Moore, “Environment-Behavior Studies,” in Hames C. Snyder & Anthony J. Cataness (eds.) *Introduction to Architecture* (New York: McGraw-Hill, 1979), p. 46.

Through probing and discussing these questions on human needs, this paper will try to find a number of ideas, causes and know-hows of some utilitarian benefit for studying at school and working in the practical field. With this thesis and purpose of research, I am trying to find hopefully a theoretical linkage between three groups concerned, which I mentioned above.

Although the main body of discussion will not avoid the criticism against generality, however, I hope the discussion will not lose its validity, because my main concern is not the project-oriented fragmental knowledges, but the comprehensive interrelation of issues in question.

II. WHAT are the Human Needs?

At the beginning, this question could plunge us into an exhausting search in every field of human knowledge.⁽¹¹⁾ It might more likely confuse us rather than enlighten us.

In its broadest sense, 'human needs' are those desires and wants which people expect to find and enjoy in any physical environment⁽¹²⁾ for either brief or extended periods of time.

To be operational, this somewhat vague definition should be articulated by identifying a couple of attributes.

First, it indicates *the biological, psychological, behavioral and cultural aspects of human nature*. Since pre-historic period, man has always adapted himself to his environment in order to survive, but he has also manipulated the environment to his own needs. Among those needs which generate the whole range of human activities, some have been changed or disappeared, while some have remained unchanged. Also the importance of a certain type of needs have fluctuated.

Biological needs, which derived from the genetic constitution, are shared by all human beings, irrespective of time and place, and almost unchanged since man's advent on the earth.⁽¹³⁾ Such physiological needs as adaptable limit of heat, noise, light, etc. are exam-

(11) See, for the psychologist's view on basic human needs, A.H. Maslow, *Motivation and Personality* (New York: Harper & Row, 1970); and for the social scientist's view on human needs reflected in the urban environment, Bronislaw Malinowski, *A Scientific Theory of Culture* (New York: Oxford Univ. Press, 1960).

(12) "The 'physical environment' means the *complexity* that constitutes any physical setting in which men live, interact, and engage in activities for either brief or extended periods of time." Harold M. Proshansky, "Environmental Psychology and the Design Professions," in Jon Lang, et al., (eds.) *Designing for Human Behavior* (Stroudsburg, Pa.: Dowden, Hutchinson & Ross, 1974), p.73.

(13) Rene Dubos, "The Biological Basis of Urban Design," in C.A. Doxiadis(ed.), *Anthropopolis: City for Human Development* (New York: W.W. Norton, 1974), p.256.

ples. When it comes to *psychological needs*, a large portion which might be related to physiological needs is still governed by the biological needs. For instance, the process of perception can be explained almost by the biological facts.

Moreover, what the human needs refer is primarily the relationship between man and the man-ordered and -defined environment, and thus, human needs are related to a greater or lesser extent with *human behavior*, what people do at particular places and times, how people respond in a given physical setting.

One step further, we have to consider the *idio-cultural human needs*. The plentiful diversity of cultures exactly indicates many a different ways to satisfy those fundamental and universal human needs within the constraints imposed by local conditions and traditions, *i.e.*, local cultures.

Traditionally, as Rene Dubos contends:

Planners and architects [and urban designers] have thus been primarily concerned with designing settlements for political Man, social Man, economic Man, industrial Man. But they have rarely paid much attention to the fundamental needs of biological Man or psychological needs. The satisfaction of biological needs...are[is] concerns [concern] which have [has] come to the minds of planners [designers] only during very recent decades.⁽¹⁴⁾

Such being the case, the concerns as well as the state of theory-building are so young and rudimentary that a consensus on what is the content of these attributes is not yet available. For instance, 'safety' as a human need is not so much regarded by Dubos, while is much esteemed by Doxiadis.⁽¹⁵⁾ Even the definition and the scope of the discipline of environmental psychology are controversial now.⁽¹⁶⁾

Under these circumstances, we seems to have few choices but to go on researches, while admitting the importance of above-mentioned attributes.

Secondly, *human needs are not of the individual, but of the multitude.*⁽¹⁷⁾ In considering the relationship between man and the physical setting, the problem of deciding which of the various levels of human or social organization should be considered might bother us.

(14) *Ibid.*, p. 255.

(15) *Ibid.*, p. 13 and p. 253.

(16) Harold M. Proshansky, et al.(eds.), *Environmental Psychology: Man and His Physical Setting* (New York: Holt, Rinehart and Winston, 1970), pp.1-10; Yi-Fu Tuan, "Environmental Psychology: A Review," *The Geographical Review* 62(20): April 1972, pp. 245-256.

(17) See, for the relationship between individual and collective needs, George Banz, *Elements of Urban Form*(New York: McGraw-Hill), pp.24-41.

Although the relationship at the level of the individual assumes considerable significance as far as the individual's microcosms are concerned, we basically concern with the relationship in general, which is to be identified at all levels of social organization.

III. WHY human needs?

There are a number of ideas which explain how and why 'human needs' become the major concern in the first place, as follows.

1. Re-evaluation of the mechanical world view

The 'mechnomorphism' or mechanical world view which regards the world as a megamachine, within which all organic, living things and characteristics can and should be reduced into articulated, finely measured, standardized and replaceable parts,⁽¹⁸⁾ has been responsible to a great degree for opening the age of scientific technology which has been worshipped as means to utopia since nineteenth century, as well as rendering more convincingly ourselves "the lords and possessors of Nature,"⁽¹⁹⁾ separating man from the Nature.

This theoretic exposition of the machine as the exclusive source of modern form, with the misinterpretation of 'functionalism'⁽²⁰⁾ helped open the Modern Movement in architecture in 1920's. Led by Le Corbusier,⁽²¹⁾ this movement in the desire to mate art and technology affected the whole cycle of urban design so negatively, laying aside its merits: it has tended to advocate wiping off existing urban fabric and replacing them with some-

(18) See for full descriptions on the evolution and the consequence of this world view, Lewis Mumford, *The Myth of the Machine: The Pentagon of Power* (New York: Harcourt Brace Jovanovich, 1970), esp. Ch. 3 and Ch. 4.

(19) René Descartes said, "We might also apply them[scientific knowledges] in the same way to all the uses to which they are adapted, and thus render ourselves the lords and possessors of nature." in his *A Discourse on Method* (Leyden, 1637), quoted in *Ibid.*, p. 78.

(20) Paul and Percival Goodman criticize on the constructivism which advocated new structural forms, arbitrarily, whatever the function, while losing the intimate sensibility of daily life, the human scale. This doctrine is the extremely misinterpreted result of functionalism, which called for simplicity, cleanliness(clarity). Amos Rapoport comments on the pitfall of simplicity and clarity. *i.e.*, deprivation of vitality and livability from the environment. See, Paul and Percival Goodman, *Communitas: Means of Livelihood and Ways of Life* (New York: Vintage Books, 1960), pp. 17-22; Amos Rapoport and Robert E. Kantor, "Complexity and Ambiguity in Environmental Design," *J. of the American Institute of Planners* 33(4): July 1967, pp. 210-221; and Amos Rapoport and Ron Hawkes, "The Perception of Urban Complexity," *Ibid.* 36(2): March 1970, pp. 106-111.

(21) "Geometry is the means with which we have provided ourselves for looking around us and expressing ourselves...The machine develops out of geometry...The machine gives our dreams their audacity: they can be realized." Le Corbusier, "Guiding principles of town planning," in Ulrich Conrads(ed.), *Programs and manifestos on 20th-century architecture* (Cambridge: The M.I.T. Press, 1970), pp. 89-93 passim,

thing more rational, as clearly shown in the Voisin Plan for Paris by Le Corbusier.⁽²²⁾ Along with the International Style, this movement consciously and unconsciously negated historic form and human functions and made urban environment very impersonal and inhumane.

Another several ideas such as Buckminster Fuller's bubble-domes, British Archigram Group's plugged-in capsules which try to jam people into a sort of Procrustean cells can not avoid the criticism among intellectuals as well as design field.⁽²³⁾

It seems to me that the serious introspection on these design ideas which are based on the mechanomorphism justifies the rationales of the design for human needs, on the historical view-point.

Man is not a mechanic being, but a human and humane being, as Frank Lloyd Wright once declared, "Consider well that a house [environment] is a machine in which to live but architecture [urban design] begins where that concept of the house [environment] ends. All life is machinery in a rudimentary sense, and yet machinery is the life of nothing. Machinery is machinery only because of life..."⁽²⁴⁾

2. Environmental determinism in dispute

'Environmentalism' or 'environmental determinism' is the idea that "regions with their natural and man-made features were supposed to determine human behavior and human cultures,"⁽²⁵⁾ and thus, "environment is the active agency in man-environment interactions, relegating man to the position of a powerless, if adaptable, organism caught in the grip of powerful natural forces."⁽²⁶⁾

This line of geographical idea has been for a long time sympathized as nearly a dogma

(22) Jonathnn Barnett, *Urban Design as Public Policy* (New York: Architectural Record, 1974), p. 3; Paul and Percival Goodman, *op. cit.*, pp. 42-49.

(23) This line of ideas has a thread of connection with Le Corbusier who thought the residences are *machine à vivre* or machines for living, the unit of living is the *cellule* or the cell, standard in construction and layout and arranged for mass servicing. See, Wolf Von Eckardt, "Art, Architecture, and the Quality of Life," in Commission on Critical Choices for Americans (ed.), *Quality of Life* (Lexington, Mass.: Lexington Books, 1976), pp. 381-382; Paul and Percival Goodman, *op. cit.*, pp. 44-46.

(24) Frank Lloyd Wright, "Young Architecture (excerpt)," in Ulrich Conrads (ed.), *op. cit.*, p. 124.

(25) George Hagevik and Lawrence Mann, "The 'New' Environmentalism: An Intellectual Frontier," *J. of the American Institute of Planners* 37(4): July 1971, p. 274.

(26) Paul Ward English and Robert C. Mayfield (eds.), *Man, Space, and Environment: Concepts in Contemporary Human Geography* (New York: Oxford Univ. Press, 1972), p. 4.

among design and planning professions.⁽²⁷⁾ 'Architectural determinism' as a version⁽²⁸⁾ holds that social and economic ends are supposed to be attainable by manipulating and improving, among other things, the physical environment; that good environment is a sort of sufficient condition to make people happy; and that "the relationship between these factors is a one-way relationship in which social behavior is the dependent variable."⁽²⁹⁾

Meanwhile, a number of empirical studies proved that the physical environment does not play as significant a role in people's life as the designer expects. The failure of the Reform Movement in the late nineteenth and early twentieth century, which was mainly based on a 'facility-centered theory of social change' with no desire to change the economy or the social order,⁽³⁰⁾ and the experience of *The Levittowners* which proved that the primary effect on people is not created by the physical environment *per se*, but by the social environment⁽³¹⁾ are distinct among numerous examples.

On the other hand, we can not negate the polemics that the physical environment alone can *influence* to a considerable extent, although hardly it *determine* human behavior or happiness, as proved by a number of empirical as well as theoretical studies.⁽³²⁾

Therefore, it might be reasonable to take the 'possibilism' or 'probabilism'⁽³³⁾ instead of naive and strict determinism. *i.e.*, "while the environment—natural or built—seldom (if ever) determined human behavior, it can influence, facilitate, and make possible, even probable, certain kinds of human activities."⁽³⁴⁾

With this in mind, it seems rather logical to take the view of designing for people, for human needs, but not for the physical environment *per se*. Man should once again

(27) See, for the reasons of this attitude, George Hagevik and Lawrence Mann, *Loc. cit.* and for further description, A. Rosow, "The Social Effects of the Physical Environment," *J. of the American Institute of Planners* 27(3): May 1961.

(28) Maurice Broady, "Social Theory in Architectural Design," *Arena*, The Architectural Association Journal 81(898): Jan. 1966, pp. 149-154.

(29) Maurice Broady, "The Social Context of Urban Planning," *Urban Affairs Quarterly* 4(3): March 1969, p. 357.

(30) Hans Blumenfeld, "The Role of Design," *J. of the American Institute of Planners* 33(5): Sep. 1967, pp. 306-307; Herbert J. Gans, "Planning for People, not buildings," *Environment and Planning* 1(1): 1969, p. 34.

(31) Herbert J. Gans, *The Levittowners* (London: Allen Lane-The Penguin Press, 1967).

(32) See, for instance, Oscar Newman, *Defensible Space: Crime Prevention through Urban Design* (New York: MacMillan, 1972); Robert Gutman, "Site Planning and Social Behavior," *The Journal of Social Issues* 22:1966, pp. 103-115.

(33) The controversy on environmentalism, possibilism and probabilism is briefly described in *International Encyclopedia of the Social Science*, 1968 ed., s.v. "Environmentalism."

(34) George Hagevik and Lawrence Mann, *Loc. cit.*

take command of the physical environment.⁽³⁵⁾

3. Reconsidered role of designers as professionals

Design in a general sense is the process of solving a problem which "is generated by the desire to transform one state of affairs to another."⁽³⁶⁾ This problem may be exposed all by itself, or conceived by the clients or by the designer who "prefer a somewhat higher discount rate for their social system [environment] than the public at large."⁽³⁷⁾ But in any case, the 'problem' to be solved is not, of course, that of designers, but that of the client who often cannot identify the problem, or even worse is not aware the existence of the problem at all due to lack of professional knowledge and view.

True it is with the design as a goal-achieving process: the client might not be able to achieve his goal satisfactorily, because professional knowledges and skills are not with him. "A professional is not supposed to influence his client's objective [goal], but to improve the means for achieving the objective [goal]."⁽³⁸⁾

Therefore, the prime role of the professional including urban designer might be limited to delivering so-called 'esoteric services'⁽³⁹⁾ or professional services to the client in helping either solve the problem or achieve the goal by providing the professional knowledges and skills.

Furthermore, in the course of problem-solving or goal-achieving process, a value-judgment is unavoidably involved. However, this judgment should not be within the designer's discretion, but should be based on the value system of the client. Designer had better give up his rooted conviction that his own judgment is 'supreme' and thus he has to take the responsibility for tuning the client into his value system,⁽⁴⁰⁾ because there is no such a single value system for design which is valid for anyone in a given environment,⁽⁴¹⁾ es-

(35) This idea, however, should not be mixed up with an obsolete ecological man-environment relationship which permitted man's one-sided mastery over nature.

(36) Francis Ferguson, *Architecture, Cities and the Systems Approach* (New York: George Braziller, 1975), pp. 16-17.

(37) Richard L. Meier, "The Future of the Design Professions," *Ekistics* 219: Feb. 1974, p. 93.

(38) Koichi Mera, "Consumer Sovereignty in Urban Design," *The Town Planning Review* 37(4): Jan. 1967, p. 307.

(39) Everett C. Hughes, "Professions," *Daedalus*: Fall 1963, p. 655.

(40) John Zeisel holds that "designers imposes his own values unconsciously or consciously on the people for whom he designs *behaviorally, symbolically and aesthetically*." (italic mine), John Zeisel, "Fundamental Values in Planning with the Nonpaying Client," in Jon Long, et al. (eds.), *Designing for Human Behavior* (Stroudsburg, Pa.: Dowden, Hutchinson and Ross, 1974), p. 294.

(41) Koichi Mera, *op. cit.*, p. 306.

pecially in a pluralistic and democratic society.

This is another rationale of designing for human needs.

4. Urban design as a social art

The growing interest in human needs as a design criterion arises from a simple but important fact which we have neglected for a long time: any physical environment cannot be conceived apart from the human activities it serves to facilitate and to encourage. Design is almost meaningless without a reference to how the physical environment will be *used* by people.

An analogy will help our understanding.⁽⁴²⁾ The urban designer is a sort of theatrical producer, and the physical environment is the setting in which people can perform various activities. However, humility and anonymity are the basic requirements for the urban designer not to make the drama a *fasco*, because the environmental drama is not performed by the urban designer himself as, for instance, so-called pure art such as painting or sculpture are, and because 'the physical environment as a setting'⁽⁴³⁾ is not reserved for the designer's self-expression.

If we can agree that the urban design is a sort of art, it must be a 'social art,'⁽⁴⁴⁾ of which *raison d'etre* is not for the individual self-expression, not for the 'sole aesthetic purposes,'⁽⁴⁵⁾ but for the embodiment of social ends. The physical environment is so deeply and widely interconnected with the human society that urban designer should not escape his social responsibility.

However, along with the rooted belief in environmental determinism, an urban designer seems to have an inherent tendency to neglect or ignore people. Designing the environment through marking off the land and planning the structure along arbitrarily-chosen geometric forms such as axis, cubic, vista, etc., and leaving human activities to take their own course is still haunting the profession. A number of empirical studies proving why and how a facility or a physical environment is under-used, non-used or mis-

(42) See, for a similar idea, Steen Eiler Rasmussen, *Experiencing Architecture* (Cambridge: The M.I.T. Press, 1959), pp.10-11.

(43) Wolf Von Eckardt, "Our Design Behavior," in Center for Policy Study, The Univ. of Chicago (ed.), *The Social Impact of Urban Design* (The Univ. of Chicago, 1971), p. 71.

(44) Formalism in art of which watchword is "art for art's sake, not art for life's sake" is taking this way of thinking. *Encyclopaedia Britannica Macropaedia*, 1975 ed., s.v. "Philosophy of Art."

(45) Similarly, "physical plant[environment] is the *background* and human activity is the *foreground*. Against the background we do work and strive toward our ideas or just live out our habits..." Percival and Paul Goodman, *op. cit.*, p. 3.

used by a marginal number of people can largely be attributed to a misconception of this thesis.⁽⁴⁶⁾

IV. For WHOM?

The rationales being justified, next issue is to find the 'right people' whose human needs deserve the service of urban design. Let's start by elaborating the concept of 'client'—all the individuals and groups who demand a certain quality and quantity of design.

Generally speaking, there seems to exist two kinds of clients:⁽⁴⁷⁾ One group is the 'nominal client' who makes decisions on the form, kind and scope of design, construction and sometimes maintenance. Usually he is a 'paying client' who pays either for profit-making or for nonprofit-making purpose. Governments, institutions and developers belong to this category. Another group is the 'substantive client' who actually occupies and uses the product of design. Usually they do not directly pay to the designer for his service. Inhabitants, tenants, patients and users in general are included in this category. In comparison with the small-scale architectural design, where the nominal client is often identical with or at least closely related to the substantive client, in the realm of urban design few nominal clients happen to be identical with or related to the substantive client. Worse yet, there is no guarantee that a feed-back system between two groups exists.

Such being the case, following question is inevitable. Between two groups, which is the right people with whom urban designer concerns? Whose needs are more important for the designer's reference?

On the one hand, it seems almost impossible in a practical sense to serve the substantive client without regards to the nominal client; because we have developed very few effective feed-back systems between them, and the designer in charge might not want to lose his commission through neglecting the nominal client who will do contract and payment to him. On the other hand, devoting solely to the nominal client, while ignoring the substantive client, seems to be unreasonable in view of our interest in design for human needs. Therefore, the urban designer had better pay attention to the needs of

(46) See, for example, Seymour Gold, "Nonuse of Neighborhood Parks," *J. of the American Institute of Planners* 38(6):Nov. 1972, pp.369-378; Jane Jacobs, "Why Parks live or die," *Architectural Forum*: Oct. 1961, pp.144-145.

(47) Koichi Mera, *op. cit.*, pp.308-309; John Zeisel, *op. cit.*, p.295.

the substantive client as more important, or at least important as the nominal client.⁽⁴⁸⁾

With this fact in mind, let's discuss in detail about the nature of the substantive client. After Kevin Lynch, the nature of the substantive client can be summarized as following:⁽⁴⁹⁾

The client is:

$$\left\{ \begin{array}{l} \text{present} \\ \text{absent but reachable} \\ \text{not reachable but known} \end{array} \right\} \text{ and is } \left(\begin{array}{c} \text{homogeneous} \\ \text{or} \\ \text{complex} \end{array} \right) \left(\begin{array}{c} \text{vocal} \\ \text{or} \\ \text{silent} \end{array} \right), \text{ or unknown.}$$

The job to identify the human needs becomes more difficult and sophisticated as the nature of the client is changing from the most straightforward situation (the client is present, homogeneous and vocal) to the worst uncertain case (the client may be not only unreachable but unknown). Urban design usually has to deal with the more sophisticated and uncertain part of this whole spectrum of client's nature.

If so, urban designer's task is condensed to identify the nature of his substantive client in the first place (to find the right people), and to search the human needs of that kind of client.

Along this, the other important issue is that needs of substantive client should be defined in terms of 'latent needs'—underlying social meaning of behavior and perception to the user group or the social aspect of human needs, rather than merely in terms of 'manifest needs'—what the user says he needs.⁽⁵⁰⁾ For instance, the single family housing and its surroundings by and large do double services as status symbols as well as shelters, with a particular kind and layout of window, porch, grasslawn, etc.⁽⁵¹⁾

Furthermore, latent needs often differ for different socio-cultural groups, while the manifest needs are at least superficially similar.⁽⁵²⁾ Different conceptions of the rooms—living rooms, dining rooms, and kitchens, etc.—in different socio-cultural groups demonstrate the importance of this thesis.⁽⁵³⁾

Also, we must be careful about the fact that substantive client does not always clearly identify his latent needs, or is not always open-minded when asked by designers and or

(48) Koichi Mera, *op. cit.*, p. 310.

(49) For the diagram and further description of each situation of the client, see, Kevin Lynch, *Site Planning* (Cambridge: The M.I.T. Press, 1971, 2nd ed.), pp. 97-100.

(50) John Zeisel, *op. cit.*, p. 296.

(51) W. Zelinski, *The Cultural Geography of the United State* (Englewood Cliffs, N.J.: Prentice-Hall, 1973), p. 92.

(52) See chapter. II of this paper.

(53) John Zeisel, *op. cit.*, pp. 296-298.

the nominal client.

V. HOW for human needs?

A number of operational means in designing for human needs are available.⁽⁵⁴⁾ In this paper, I shall limit myself to discussing about the 'freedom of choice' for designing with 'unknown,' or 'not reachable but known' clients, and the 'user participation' for designing with 'present' or 'absent but reachable' client, respectively, and about the evaluation technique.

Before going on, let's briefly think about the 'pluralism' and 'advocacy.' Since mid-1960's these ideas became very popular among design and planning professions.⁽⁵⁵⁾ In short, pluralism describes the *process* which deals with those political contentions at stake, while advocacy describes the *role* of professionals in this process or "the *means* of professional support for competing claims about how the community[environment] should develop."⁽⁵⁶⁾ (*italic mine*)

And thus, acceptance of this position excludes both the notion of a single best solution⁽⁵⁷⁾ and the notion of the planner [designer] solely as a technician.⁽⁵⁸⁾ The urban designer who concerns with design for human needs must be a pluralism-based advocator, because he tries to Search for multiple alternatives instead of an unitary 'best' solution and because his judgement is based on the plural value system of the client.

Therefore, 'freedom of choice' might be an implicit embodiment of this position for the unknown or known but not reachable client, while 'user participation' is an explicit manifestation for the present, or absent but reachable client.

1. Freedom of choice

Although freedom of choice⁽⁵⁹⁾ can be applicable to the whole range of human environment, in this study it implies that the individual can exert control over his physical setting to a considerable extent, or that the physical setting should maximize the freedom

(54) Kevin Lynch, *op. cit.*, pp.100-117.

(55) See, Paul Davidoff, "Advocacy and Pluralism in Planning," *J. of the American Institute of Planners* 31(6): Nov. 1965, pp.331-337; Lisa Peattie, "Reflections on Advocacy Planning," *Ibid.* 34(2): March, 1968, pp.80-88; Donald F. Mazziotti, "The Underlying Assumptions of Advocacy Planning: Pluralism and Reform," *Ibid.* 40(1): Jan. 1974, pp.38-47.

(56) Paul Davidoff, *op. cit.*, p.333.

(57) Lisa Peattie, *op. cit.*, p.81.

(58) Paul Davidoff, *op. cit.*, p.331.

(59) See, for the wide discussion on freedom of choice, Edwin H. Wilson (ed), *Freedom of Choice* (symposium proceedings held in Dayton, Ohio, 1968).

of the client in choosing the way he wants to live and use.

Freedom of choice is in the first place effective concept to design an environment which is to be used by future clients who are not now identified, or not reachable, although identified. By and large it is a critical aspect of man's behavior in his attempts as satisfying human needs in relation to his physical environment.⁽⁶⁰⁾ Also collectively, it is one of the most paramount prerequisites to make a pluralistic and democratic society wherein an inherent individualism, a strong belief in democracy, and a long-trend toward increasing structural differentiation⁽⁶¹⁾ and functional specialization⁽⁶²⁾ exist. The fact that people have different needs, tastes, expectations and ideas of how they want to live stresses the necessity of freedom of choice. To this end, a number of requirements are necessary.

Firstly, a given physical setting should provide many alternatives to satisfy not only a primary purpose, but also directly-related and remotely-related subsidiary purposes.

For example, a street should provide a spatial setting in which people can enjoy various street life, happenings, and a lot of spontaneous and incidental activities, putting aside its primary role as a circulation corridor. In this sense, freedom of choice means a flexible environment in which the 'adaptability of people'⁽⁶³⁾ is possible to the greatest extent.

Secondly, a physical setting in the first place should be articulate in its expression of its primary purpose. However when it comes to subsidiary purposes, ambiguity and complexity are sometimes more desirable to permit maximized spontaneous uses by the client, and possible changes both in the environment as well as in the client's value system. In this case, 'complexity' is taken to mean not the disorder but the diversity, and 'ambiguity' to mean not the uncertainty but plurality of interpretation.⁽⁶⁴⁾

Thirdly, freedom of choice would be given in such a way not only to provide a number of visible alternatives, but also to make frustrated people, who do not even know what to hope for, aware that alternative choices are available over here in everyday life.

(60) See, for more descriptions of the individual-based freedom of choice, Harold M. Proshansky, et al., "Freedom of Choice and Behavior in a Physical Setting," in Harold M. Proshansky, et al. (eds.), *Environmental Psychology: Man and His Physical Setting* (New York: Holt, Rinehart and Winston, 1970), pp. 173-183.

(61) The differentiation of special institutions out of more amorphous and homogeneous collectivities. The process by which societies become more complex. *Society Today* (Del Mar, Calif: CRM Books, 1971), pp. 25-26.

(62) *Loc. cit.*

(63) See, Kevin Lynch, "Environmental Adaptability," *J. of the American Institute of Planners* 24(1): 1958, pp. 16-24; Kevin Lynch (1971), *op. cit.*, p. 39; John Zeisel, *op. cit.*, p. 295.

(64) Amos Rapoport and Robert E. Kantor, *op. cit.*, pp. 210-221.

Finally, the designer can include his own normative preferences for the way of life, and the way of using the physical environment on condition that alternative choices are firmly guaranteed.

To provide a freedom of choice or a flexible environment should be considered as a positive way of designing for human needs in the urban design process which usually deals with heterogeneous, dynamic and unknown people and environment. As Lawrence Halprin said:

The ultimate purpose of a city in our time is to provide a creative environment for people to live in. By creative, I mean a city which has great diversity and thus allows for *freedom of choice*...⁽⁶⁵⁾ (italic mine)

2. User participation

User participation is another effective way to let the client control over his physical setting to a satisfactory degree, when the client in question is mostly present, or absent but reachable.

In doing this, a couple of issues must be worked out. Firstly, the clients or their assembled interest groups are more often *merely reacting* to given design proposals than *positively proposing* their concepts of appropriate goals and future reaction,⁽⁶⁶⁾ due to lack of professional knowledges and skills. To avoid this situation, 'participation' should be done by providing the interest groups with opportunities to express their latent needs, to have open debates among themselves, to be well informed about the underlying reasons for design proposals, and to respond to them freely in the technical language of professionals.

Secondly, user participation should not be abused as a gimmick or as "a technique for getting people to comply with planning design proposals more easily,"⁽⁶⁷⁾ taking mean advantage of the client's ignorance and indifference. Such an attitude is bound to make the result of design disastrous, when the designer viciously form a illicit connection with one particular interest group under a tacit agreement, or he just tries to dodge the 'legal requirement'⁽⁶⁸⁾ of inclusion of citizen participation in the design process.

3. Feedback/evaluation

To avoid any trial-and-error and to ensure flexible changes over time, evaluation based

(65) Lawrence Halprin, *Cities*(Cambridge: The M.I.T. Press, 1972), p. 7.

(66) Paul Davidoff, *op. cit.*, p. 333.

(67) Maurice Broady(1969), *op. cit.*, p. 370.

(68) See, for more detail, section 101(c) of the United States Housing Act of 1949, as amended.

on human needs criteria and feed-back to the design process should be done for extended periods of time during and after implementation.

To this end, careful techniques are required, since people cannot usually identify their problems, and do not even know what they exactly want. If the evaluation techniques are designed to be interactive to discover the latent reasons why some environment turned out to be good or bad in terms of satisfying human needs, very articulate and purposeful responses are available from the client and become useful and valid as design criteria.⁽⁶⁹⁾ Basically this argument is not new at all. This is what is all about any design criterion.

With an attention to these means, our troublesome question is how to measure the degree to which a given physical environment works well to the satisfaction of users. To this question, I think the 'performance-based evaluation' seems an appropriate answer.

'Performance' being defined as 'a statement in precise terms the characteristics desired by users of a product without regard to the specific means to be employed in achieving the results,'⁽⁷⁰⁾ this kind of evaluation approach can eliminate the necessity of 'prescriptive specifications,'⁽⁷¹⁾ on detailed materials, dimensions, etc. Consequently more objective, comprehensive evaluation on the latent human needs of heterogeneous Clients can be made possible. On the other hand this evaluation approach has to solve the following built-in problems to gain a broader validity.⁽⁹²⁾

—Fragmented information obtained by a parametric approach which examines one or a small number of parameters with everything else being constant cannot be resynthesized into some whole.

—The design profession is not ready to accommodate a large volume of new and precise information.

Although these problems undermine the utility of the feedback and evaluation approach, its validity still seems strong enough for us to accept and keep on refining it.

VI. Afterthoughts

So far, the rationales and knowhows of designing for human needs are discussed very broadly. I hope we now can agree with the legitimacy of the design for human needs.

(69) See, for example, Roger Trancik, "Resident's Feedback at Studlands Park: What They Said," *Landscape Architecture*: April 1975, pp. 207-208.

(70) Michael Brill, "Evaluating Buildings on a Performance Basis," in Jon Lang et al. (eds.). *op. cit.*, p. 316.

(71) *Ibid.*, p. 317.

(72) See, for more elaboration, *Ibid.*, p. 319.

As the conclusion, I would like to raise a couple of issues which need further discussions.

1. Design profession and scientists

Earlier I have mentioned about three groups which are concerned human needs. Putting aside the intellectual thinkers group, the present state of art in an interdisciplinary cooperation between design profession and scientists seems so rudimentary and insufficient. Therefore, on the one hand, the scientists who engage in the systematic studies on human needs should offer empirical informations beyond the microcosmic, static scope of their traditional domain to the design profession which is willing to accomodate and apply to the design process. This is important firstly because, without those accurate and empirical knowledges, we would be apt to imagine results that justify our favorite method of design, but which are fictious:we simply do not know what we are doing in our design unless we underdtand the human needs,⁽⁷³⁾ and secondly because, "planning [design] can be expected to *avoid* problems rather than *solve* them, by applying existing knowledge in designing a given environment, and by anticipating future needs and conditions."⁽⁷⁴⁾

On the other hand, designers should provide a special way of interpretation to the scientists, so as to ensure the purposefulness and usefulness of the feed-back. *i.e.*, they should present a framework of reference for understanding what they do, what conditions and methods they employ, and what they need and expect, to gain more competent knowledge from the scientists.

2. Pareto optimality

In designing for considerably complex uses of which unanimous agreement in the public interest is difficult to figure out, a naïve and strict Pareto optimality cannot be achievable. In a precise sense, any urban design cannot exclude the inequality in reflecting some selected human needs for specific interest groups and thus incurring some unfavors to the other groups, although urban designer tries to provide freedom of choice and to encourage the user participation.

Therefore, a sort of utilitarian approach may be appropriate in achieving the maximum benefits to those interest groups who urban designer believes are in the greatest wants.

(73) Erich Fromm, "Humanistic Planning," *J. of the American Institute of Planners* 38(2): March 1972, pp. 47-71.

(74) Harold M. Proshansky, et al.(eds.), *op. cit.*, p. 494.