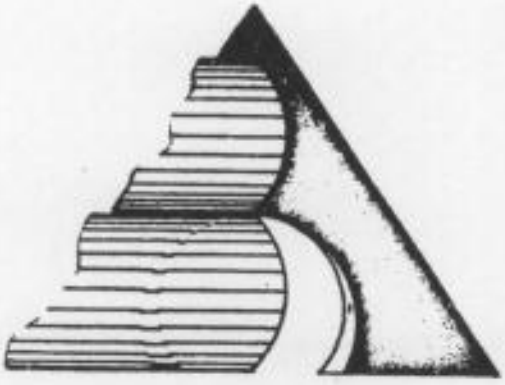
SCIENTIFIC WORKS OF TECHNICAL UNIVERSITY OF SZCZECIN
Nr 465
INSTITUTE OF ARCHITECTURE AND SPATIAL PLANNING
Nr 38



BIOARCHITECTURE
— social problems

The choice of working papers of the I-st International Symposium

Szczecin - November 1990

SZCZECIN 1992

composition: Marek Czyński

Wydano za zgodą:
Rektora Politechniki Szczecińskiej
z dnia 23.11.1992

WYDAWNICTWA UCZELNIANE POLITECHNIKI SZCZECIŃSKIEJ

Wyd. I. Nakł. 200 egz. Ark. wyd. 6,8. ark. drk. 8. Zam. nr 66/92

Zakład Poligraficzny "ZAPOL" s.c. SZCZECIN, ul. Piastów 42

CONTENTS

Augustyn Bańka

SPACE-THERAPY IN THE PROCESS OF IMPROVING THE STANDARD OF LIFE INTRODUCTORY REMARKS

For some time more often need of introducing the fundamental correction in binding up to the present philosophy of helping people (Berkson 1977) is expressed, likewise it more and more takes the shape of a specific proposal of close connection of the whole problem of health and prosperity of a man with the standard of living in space, environment (Gałkowski 1989, Bańka 1989). The idea of connecting the therapy with space is not a new, but return to the holistic health idea which descends from antiquity. In the holistic idea of health basis there is an establishment that health is the result of the balance existence in the whole structure that the human organism, social and physical environment is (Capra 1987).

According to the "new" philosophy, the therapeutical power inheres in each of the above mentioned elements. In the first of them the therapeutical power is comprised in the form of autotherapeutical ability. This means that each organism pursues to self-accomplishment and everyone has the internal power leading to cure oneself. In the second element, the therapeutic power is comprised in the healing impacct of the harmony of mutual relations between people, together with the first element this is the principle mottoo of psychotherapy. An so e.g. according to Torrey (1981, p. 42) only four elements have an influence on the therapeutical process: common picture of the world of a patient and a therapist, personal attitudes and the therapy technics. This shows that it doesn,t take into account, after the example of most of the therapists, healing properties of the physical space environment as a self-acting and integral therapeutical power. Meantime as we know even from common experiments, psychical environment - especially architectural space - has a great influence on people's frame of mind and interactions.

For some time, however, attempts to find a common language, the common area of understanding between human's heart of hearts and his environment have been made. In architecture there is search for new solutions able to reconcile human dimension with the technological pro-

gress. Next, in modern psychology a trend develops, inspired by the old truth that to be able to understand a man and to help him you have to see him in the context of organized psychical and social environment - family, school, work, habitation, hospital.

The fundamental change that occured in the paradigm of psychology concerns the attitude towards environment and none of the less that almost the whole development of modern psychology was indissolubly connected with this notion (e.g. behaviorism). In the eco-psychology (Barker 1968) and socio-psychology (Proshansky, 1978) notion "environment" is formulated not like before in the passive space dimension in which process of perception, interaction and reaction with environment occur, but in the active co-operation dimension, where both, an individual and the place of his behaviour undergo changes. Progressive reciprocal accomodation between an active human being in the course of development and changing features of the setting he lives in creates the peculiar ecology of human development (Bronfenbrenner 1981). The process of development, according to this conception, undergoes influences of various relations occuring among various kinds of environment and influences of the extensive context's side - economic, politic, legal, civilizing, in which behaviour ecosystem is prevailed (Gibson 1987).

MEANING OF SPATIAL INFLUENCES IN HUMAN LIFE

Thus far psychotherapeutical properties of variable connected with the physical environment are not suitably estimated. Barely superficial analysis of the monographic number of an architectural magzyine "Baumeister"(1985), devoted to the review of the latest tendencies in hospitals shows overdomination of technological criterions in "patterns of thinking". A hospital appears there as a "healing machine".

Psychologists, in turn, still attach undue importance either to behaviouristic conception of environment as a system of punishments and rewards or to one's own possibilities of a direct (psychotherapeutical) influence on rehabilitated persons' behaviours. Meantime, as researches of e.g. Zimbado, Hanney, Banks and Jaffey show (1978), the shape of interactions between a person in the state of a prisoner and a man playing part of a gaoler can only be explained by the whole of this situation that cannot be reduced to punishments and rewards or personal variables. The experiment executed by the above mentioned research workers shows how a tendency attempting to situate the source of manners' dis-

tempers doesn't appreciate the power of situational elements and much overrates importance of personal elements and individual disposal. Sane, healthy and educated men (students) under the institutional pressure of the "prison" environment (students, hostel as an imaginary prison) change so much that limits between the reality and illusion, sense of identity and played part, thrusted by the situation become blurred. In the Zimbado's experiment "prison space" is not only a metaphor formed from concrete and steel. This space, frist felt as unreal, where is a lot of space for the game slowly becomes the reality from which elements of game undergo expulsion, so later there are no bystanders - but participants only. This experiment shows, maybe with an unknown vehemence, tremendously powerful influence of physical space, physical parameters of institutional situation on all participants, that means these who played part of rehabilitated subjects or rehabilitating subjects. Therefore parameters of the physical environment influence not only a prisoner but also a gaoler, a particular type of interaction which we would rether attribute to elements beyond the situation e.g. inborn (psychopathy) or psychological (emotional distempers of personality).

Skipping the aesthetical side of the Zimbado's experiment - recalling the main question about limits which a psychologist cannot cross in the name of study, so called "science truths" - it is hard to overrate its cognitive value. This experiment represents current trend of psychology that formulates the dynamic dependence between an individual and environment. Besides it indicates the role that architectural setting plays in this interaction if not per se, at least by development of notion barriers, defined by the ways of using the physical elements of space. Additionally, the Zimabado's experiment enlightens, among others, that whenever the problem of the therapeutical influence efficiency is put, one cannot shirk an answer for the question, in what degree offects observed are the result of the used procedure and to what degree of architectural setting.

THE THERAPEUTIC ROLE OF SPACE

For many years architectural space as such hasn't been in the direct reach of psychologists' interest. Long enough their main object of interest has been research of isolated impulses that flow from environment. Architectural determinants of behaviour have been left out or treated in categories of an intermediary element, without stating particulars of his influence. Almost absolute lack of interest for the

architectural space flew from tendencies to treating it as a variable without greater meaning. E.T. Hall (1959) commented this fact "we treat space like sex: it exists but we don't talk about it".

In consequence of treating architecture as a passive factor, knowledge of the therapeutical meaning of architectural space is still fragmentary (compare S.S. Shumaker, W. Pequegnat, 1989). That is among others because most of the institutions occupied with the therapy haye almost antique origin, but their direct conceptional roots reach not further than two hundred years ago.

Evolution of attitudes in relation to the role of space in the process of the therapy, unfortunately is not a history of linear development from primitive forms and sturcture to more complicated, better supplying human needs. In this context instructive are classic observations of H. Osmond (1957), that he effected in a new built home for the aged. In the instance described by him, "high tech" architecture was comfortable to the ergonomics principles, but nevertheless the longer the pensioners stayed in this "technically" humanized setting, the more often they withdrew into themselves, secluded from each other. Evolution of architectural planning rules not always leads to rise of spaces achieving rehabilitation aims measured by the criteria of the quality of life.

As, among others, Osmond noticed, some kinds of space like numerous bedrooms, have a tendency to mantain a distance between people and are conductive to passive - facilitate mutual approach and as a consequence are conductive to better interhuman contacts, better atmosphere. In this light a hospital is an institution-setting, which is a mixture of socialized and unsocialized spaces, socially active and passive, socially attractive and escaaping. Attitude of various users towards each of these two forms of space activity is not equal. The hospital staff prefers the type of geometrical, well-ordered space. Patients, ordinary people can see the standard of space by the prism of home, not commonplace etc.

As results from this, architectural space shapes the therapeutical interaction, likewise it is modified itself by habits and attitude of the participants of the situation. Manners of a person being a subject to the therapy and behaviour of people controlling the therapy compose with architectural space one unit (look Proshansky and others 1978), that according to R. Barker may be defined as "milieu" (Barkker 1987) to stress its interactional character.

ARCHITECTURAL SPACE AND AIMS OF THE THERAPY

The whole of possible ways of space utilization in the process of the therapy may be reduced to three fundamental models of "milieu" creation:

a) accidental "cramming" of various kinds functions in architectural space, disregarding its peculiar therapeutical property,
b) normative treatment of spatial functions on the basis of technical thinking,
c) psycho - ecological forming of interactions between a man and physical (architecture) and social setting.

In the first model space is treated in the passive element categories. In result of this a paradoxical phenomenon may be observed, that the same therapeutical functions are realized in different space formations and conversely; the same space formatins are a base for various therapeutical programmes. Such milieu is the result either of ignorance of the therapeutical space power existance or necessity of acknowleding social will. In the second case the problem is that therapeutical aims may be divided into internal and external. External therapeutical aims are these that attributed to a certain social institution determinate its symbol status, have a formal character (are formed explicite) and in this connexion are supported or combated (e.g. MONAR) in the society. These external functions fix the status of the institution in the society strukture, and connected with this symbol status determinates social readiness to bear costs of economic maintenance.Society accepts necessity of bearing costs of the organization of social help houses, centres for people suffering AIDS, places of recreation and amusement, but it grants different value to these various aims. Because costs of supporting rehabilitation, therapeutical programmes are born by the society, no wonder that it follows the criterion of economizing costs and one of its fundamental elements is functionally - spatial adaptation of already existing buildings. Location of rehabilitation institutions in manor-houses, mansions,aftermonasterial buildings and also standard normative - technical approach towards use of space is much cheaper than building any specialized architectural forms from the basis, but it is not always consistent with internal aims of the therapy (resulting from its nature).

The fact of "cramming" therapy programs into accidental and adapted spaces is not bad itself. The problem is that such randomness hinders settlement, what spatial features of milieu are the most favour-

able from the angle of the internal therapeutical aims. These dependences are hard to settle univocally becaause different are aims of institutions like cripple co-operation, hospital for nervously sick or a lunatic asylum. Additionally, particular aims change according to the role of administering and auxiliary-service staff. In many casses internal and external aims are contradictory to each other, like e.g. social expectations for spatial seclusion of some patients treated psychiatrically with requirements of the humanistic therapy - realizing the demand of assertion of feeling of dignity and selection of manners liberty.

Adapting already existing objects to various programmes doesn't put possibilities of using healing properties inherent in space. The only problem is that really few is known about it. Numerous proofs, unfortunately of anecdotic not scientific character, testify that many adapted spaces have very good therapeutical values from the point of view of the therapy "per se" and the therapy "largo sense" - that is general psychological background appearing in the staff behaviour and patients, manners in the process of the proper therapy (per se), family and social surrounding behaviour.

However, unreflective relation to space caused that peculiar dependences between the physical-spatial context of the therapy nad its efficincy hasn't been registered, what in consequence makes it impossible to use them in any new situations.

NORMATIVE - STATISTICAL VISION OF SPACE

In the normative model of space that quite lately passed for a symbol of modernity, statistical-standard criteria are preffered. This is the result of economical values in technical thinking and as a sign of a general process of passing in planing methods from art rules and intuition to systematized planning (Bańka 1985).

What proves correct in technic, however, most explicitly dissapoints in the world of human values and what one can best see in the context of the internal therapy aims. Standard technical criteria contain discrepancy. What is standard is average and equalizing. In the general conviction standardity is a synonym of social justice and standard of life. Still such idea of justice doesn't provide for alternative forms of the therapy. Recent years development of semantic and syntatic architectural codes led that the same "great board" was employed to erecting dwelling-houses, kindergartens, infant nurseries, hospitals. Ideogram of the great board hinders individualization that need is not a result of arbitrary

preferences, but aims that each institution has to play in the society the role of rehabilitation and psychotherapy. Lack of greater progress in overcoming architectural barriers is a result not only of scarcity of will or imagination but the result of inability of introducing changes in typical solutions: width of doors in lifts, staircases or in flats.

Nowadays too much attention is attached to the extensive measures of standard and resilience of life like PN (Polish Standards), Accreditation Council (1978) or US Department of Health, Education and Welfare (1974). Off course standard solutions are used moreover of psychological reasons, because people are carriers of various stereotypes and prototypes (Honikman 1976), which securing permanent culture development are also reasons of its temporary ossification. The famous project of school in Ivre, in the vicinity of Paris, is a rare example of overcoming the fossilized stereotype of an institution which prototype concept was formed in the era of Komensky.

SPATIAL THERAPY AS PSYCHOECOLOGY OF THE STANDARD OF LIFE

In the third psychoecological model, the essence of the therapy is delimited by process of interaction between an organism and physical and social space. The physical architectural space is one of the most importaant features of the setting, where a man lives and develops. In other words, the architectural space co-originates ecosystem of behaviour (behaviour setting - Barker 1978) and ecosystem of human development (ecology of human development - Bronfenbrenner, 1981), deciding about its standard of life and psycho-physical health. The standard of life in setting and health are inseparable correlates of the same process of keeping dynamic balance between an orgnism and physical and social environment. Novelty of this approach depends on treating architecture as a factor actively forming ecosystem of human behaviour and development and actively participating in the process of perception (Gibson 1987). Lack of the environment stimulation forejudge that cognitive, emotional and psychomotorial functions cannot assume the right shape although the nervous system didn't reveal any deviations from the normal state (Lerner 1978, Bush-Rossenagel 1981).

The psychological therapeutical mechanism of the architectural space depends on liberating in units and social groups processes and manners contributing the positive standard of life-activity, development,

responsibility for oneself and others, group solidarity ("we feeling"), positive picture of oneself. This means - contrary to opinions held in the past - that setting liberates in a man process that may be called "self-optimalization", tending towards choosing the program which secures a unit the right direction of acquiring schemes of manners. As Gibson underlines (1987), however, functioning of human perception systems may be fair understood only when they are formulated and described in the way allowing to show what human perception really has to contain from the point of view of an organism survival and optimal functioning in environment (Kaminsky 1989). According to Gibson (1987) architecture as an ecosystem element has both, positive and negative "affordances" that supply some kind of ways of using environment and lead to more or less favourable for a man consequences. Units receive environment and behave it in a way that these affordances let them.In the psychoecological model, fundamental element of the therapy is space. It may be as well an instrument of the proper therapy, i.e. rehabilitation of people with physical and psychical disfunctions, as a therapy in general meaning, having in view general standard of life in each situation, i.e. habitation, work, study, rest, recreation environment.

FINAL REMARKS

Psychoecological formula of the therapy means conscious control of interactions among the three elements - physical (architectural) environment, subject of the therapy (a patient, person devoting oneself to recreation etc.) and setting composing social milieu of the therapy process (medical and psychological staff, society realizing the same therapeutical aim, farther and closer participants in th therapeutical system). Achievement of this apparently simple establishment, however, requires fulfiling some conditions. So minimum practical knowledge about each of these three elements is required. Unfortunately, in the instance of architectural environment the problem is not so easy to solve. One can show two main reasons: deficits of theory (Kaminsky 1989) and data stating human manners in the natural form in comprehensive situations (Barker 1978).

If the point is lack of theory in consequence of preffering experimental formulations in psychology development, they are quickly made up. On the other hand, lacks referring to calusal dependences between different aspects of physical and social existence of a man and physical environment are still so big that they hinder rational use of

potential benefits of space. As Barker noticed (1968, p.3) "we have at our disposal everyday records of exygen contents in water of rivers, temperature of soil on plantations, information about volcanoes activity. Knowledge of manners of passing trushes..., but barely few researches give us particulars about spatial manners of protective mothers of small children, teachers in classrooms, families while having a meal... Because there is not enough data, it is replaced by speculation on problems like: what is the difference between the way of life of members of small and big families? What changes occur in connexion with the elapse of generations and in this connexion with participation of children in different generations?... Before we will be able to answer such questions, first we have to learn manners better than rights ruling them only. We have to learn the schedule of the essential conditions of such and not different human behaviours".

Effects of the deficit of spatial manners of people data may be seen in both, lowered efficiency of the therapy per se (rehabilitation) as in annihilating positive effects in the therapy largo sense (Bańka 1990).

Although in both cases psychological mechanism of spatial therapy is much the same, still here and there intentional basis of the therapeutical use of space is different and as following, the schedule of responsibility is different. Spatial therapy in rehabilitation is only one of many elements of the process, theory and practice of healing. Regardless of the part that architecture could play in it, the biggest responsibility for final effects rests with the person controlling the process (doctor, psychotherapeutist, physiotherapist, trainer, etc.). The task of an architect is only matching the right shape to formulated and delivered him ready demands.

Completely different the matter is in the case of the therapy largo sense. Optimum terms of appearing of the positive space properties are created to large extent by an architect. In this task, however, he cannot rely on help of science or people actively engaged in political, economic, sport work. As R. Barker indicates (1968, p.145), "the fact that in psychological science literature there's lack of proper data about ecology of a game, amusement, laughing, talking, conflicts and mistakes places psychology in the face of monstrous non-serving its purpose. This task faces the ecological psychology...".

Want of psychological data expressing clausal dependency between "behaviour formation" and "spatial formation" of various milieu is - as Joan Carrol writes (1982) - "a convenient pretext for architects and plan-

ners for closing themselves in their own criteria of development as in the proverbial ivory tower". Problems of space will gain the dignity they deserve only when all interested people will reveal necessary in this sphere responsible attitude towards it.

BIBLIOGRAPHY

1. Accreditation Council for the Mentally Retearded and other Developmentally Disabled Persons. "Standards for services for developmentally disabled individuals". Joint Commision on Accreditation of Hospitals, Chicago 1978.
2. Bańka A.: Psychologiczna struktura projektowa środowiska: studium przestrzeni architektonicznej. Wydawnictwa PP, Poznań 1985.
3. Bańka A.: Projektowanie środowiska dla optymalizacji interakcji z osobami niepełnosprawnymi, (w:) Optymalizacja interakcji w procesie usprawniania osób z dysfunkcjami fizycznymi i psychicznymi, red. S. Kowalik, J. Kwiek, B. Szychowiak, Wydawnictwo UAM, Poznań 1989, p.24-31.
4. Bańka A.: Praca a rekreacja - dylematy psychologiczne, (w:) Psychologiczne problemy reakcji sportowej. Wydawnictwa AWF, Poznań (in the press).
5. Barker R.: Ecological psychology. Stanford University Press, Stanford, Ca. 1968.
6. Barker R.: Behaviour settings: human habitats and behaviour machines. (In:) Barker and associates (eds.), "Habitats, environments, and human behaviour", Jossey-Bass, San Francisco 1978.
7. Pflegeeinheiten in Krankenhausern Baumeister, 1985, 2. "Zeitschrift für Architektur, Planung, Umwelt"
8. Bechtel R.B.: Patient and community. The ecological bond. (In:) W. O, Connor and B. Lubin (eds.) "Ecological approaches to clinical-psychology", Wiley-Interscience, New York 1984.
9. Berkson G. Landesman-Dwyer S.: Behavioral Research on severe and mental retardation. "American Journal of Mental Deficienc 1977, nr 5, p.14-15.
10. Bronfenbrenner U.: The ecology of human development. Cambridge University Press, Cambridge 1981.
11. Bush-Rossnagel N.: Where is handicap in disability?: The contextual impact of physical disability . (In:) "Individuals as procedures of thei development. A life-spane perspective", Lerner R.M., Bush-Rossnagel N.A. (eds.), New York 1981, p.281-312.

12. Capra F.: "Punkt zwrotny". PIW, Warszawa 1987.
13. Carrol J.: Alienating environments, "Psychology Today", 1982, 7 p.14-19
14. Gałkowski T.: Ecological aspects of disfunctions of children development .(In:) Kowalilk, Kwiek, Szychowiak (red.), Poznań 1989.
15. Gibson J.J.: The ecological approach to visual perception. Houghton Mifflin, Boston 1987.
16. Hall E.T.: Ukryty wymiar. PWN, Warszawa 1978.
17. Honikman B.: Personal construct theory and environmental mea- ning: application tourban design. (In:) "Environmental knowing. Theories, research and methods", Moore G.T., Colledge R.G., DowdePress, Stroudsburg Pa. 1976.
18. Ittelson W.H., Proshansky H.M. Rivlin L.G.: The environmental psychology of psychiatric ward. (In:) "Environmental psychology. Man and his physical setting" Proshansky H.M., Ittelson H.M., Rivlin L.G., (eds.), Rinehart, New York 1978.
19. Kaminsky G.: The relevance of ecologically oriented theory building in environment and behaviour research. (In:) "Andvances in environment, behaviour, and design", Zube E.H., Moore G.T., Plenum Press, New York 1989.
20. Lerner R.M.: Nature, nurture and dynamic interactionism."Human Development", 1978, nr 21, p.1-20.
21. Osmond H.: The relationship between architect and psychiatrist. (In:) "Psychiatric architecture", Washington G.C., (ed), American Psychiatric Association Press 1959.
22. Shumaker S.A., Pequegnat W.: Hospital design, health providers, and the delivery of effective health care. (In:) "Advances in environment, behaviour, and design", New York 1989.
23. Torrey E.F.: Czarownicy i psychiatrzy. PIW, Warszawa 1981.
24. "United States Department of Health, Education, and Welfare. Regulations for intermediate care faciality services for the mentally retearded"arded", Federal Register, Washington D.C. 1972.
25. Zimbardo P.G., Hanney C., Banks W.C., Jaffe D.P.: Psychology of imprisoning: depravity, authority and pathology. (In:) Przełom w psychologii. Warszawa 1978.