DISSERTATIONES PSYCHOLOGICAE UNIVERSITATIS TARTUENSIS

1

ENVIRONMENTAL AND SOCIAL INFLUENCE ON HUMAN ACTIVITY

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II ON THE VALIDITY OF THE SEMANTIC DIFFERENTIAL TECHNIQUE. J. KRUUSVALL. MAN. ENVIRONMENT. SPACE. Ed. by P.Tulviste. Tartu: Tartu State University,1979, pp.118-128 (in Russian).

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ABBREVIATIONS

AS - activity subject
DDE - degree of dependence on environment
E - environment
ES - environmental subject

INTRODUCTION

Social and environmental processes are closely related in the world surrounding us and influence human behavior and activity through each other. Through organizing space and physical environment people regulate reciprocal social contacts and relations. The influence of built environment on human activity also stems from the relations between social subjects and their goals in society. But the social events, too, are environmental by their nature, the nature and direction of each particular social relationship or process depend essentially on the social environment (the field of social forces) they take place in. In order to understand environmental phenomena we have to consider their sociality, while to understand social phenomena their environmentality has to be considered. Environmental approach to different spheres of human activity, treating the world surrounding the human being as environment, is one of the basic methodological principles of the present study.

Speaking about actuality of the present theme, we have to state that the majority of the articles the present study is based on, are written in the era of weakening stagnation and breakup of the former USSR. In these days it was a success in a way to publish such work in a publication of small circulation. To present these theoretical constructs as a dissertation would not have been feasible. In the social sciences a general disbelief in new ideas and new approaches reigned. Scientific studies had to be based on conceptions by recognized scientists. The growing political and economic pressure on housing construction that was expressed by subjection of dwelling designs to requirements of construction industry, the more and more standard typifying of construction, underdevelopment of infrastructure of new housing areas, etc. was especially sharply experienced by scientists working in the leading institutes of designing living environment of the former USSR. They expected to resist to the pressure with the help of sociopsychological studies, which had to expose the real needs of inhabitants and their dissatisfaction with the urban living environment under production. According to an order given by these institutes and

with their help it became possible for the Environmental Psychology Research Unit of the Tallinn Pedagogical Institute to carry out several sociopsychological studies on living environment and way of life in several towns of the former USSR (incl. Estonia). The author of the present work participated in these studies and the empirical part of this work is based on them.

In present-day Estonia both topics discussed in this dissertation are relevant:
1) the speed of changes of social processes and relationships has created the necessity for scientific analysis and forecasting of developments in the social environment;
2) in the situation of increased social pressure a) on living environment - the reason being this time the rise of prices (cost, rents, etc.) and changes in the form of ownership (privatization) -it is essential once again to bring into the consciousness the unsatisfied needs the particular environments carry since the socialist era and to clarify in what kind of social environment the humane development of living environment would be conceivable; b) on the way of life - (decline in the standard of living, increase of the work load, fast development of service and trade, etc.). It is necessary to know to which starting situation the social changes are added, how they influence it and in what kind of living environment the way of life could develop in a humane direction.

As the articles, the present study is based on, are written already some time ago, we present some new results of study in the summary as well. These reflect the new developments in the content and structure of our conception.

The present work consists of two chapters. The goal of the first, theoretical chapter is to show using several different approaches that social influence on human activity has also environmental nature. Therefore in the first part of the chapter we present an integrative environmental model that binds natural, activity-economic, cultural and social environment into one dynamic whole and the degree of dependence on environment (DDE) as an universal parameter expressing relationship between the person and environment.

In the second part of the chapter the DDE is interpreted as indefiniteness of the condition of environment and its invariability and

qualitatively different forms are dealt with. In the third part the influence of the indefiniteness of social environment on human being as additional engagement is under discussion. In the fourth part, social environment as language and message are discussed and the decrease of indefiniteness in environment as redundancy of forwarding messages. In the fifth part, the structure of indefiniteness in the social environment with environmental subjects as its elements is under observation. Social environment is characterized by the inverse relation between subjectness and subjectivity. In the sixth part, which deals with the dynamics of social environment, the reproduction of indefiniteness as a mechanism of self-regulation, influence of the cyclic change of indefiniteness on the character of informational processes in the environment, the quantitative social force caused by indefiniteness and problems of optimality of social self-organization are considered.

The goal of the second chapter, which is based on methodological and empirical studies, is to demonstrate that the influence of living environment on human activity (way of life) has social nature for what reason this influence essentially differs (as it became evident in the first chapter) depending on the condition of the social environment. In the first part of the chapter, a review of the studies accomplished and of the methods used is given. In the second part an attempt has been made to describe, relying on the data of these studies, the structure of sociopsychologically suitable environment, which could have humane influence on the way of life of the family. It is revealed that the living environment and the way of life can only be changed through changes in social environment - family relations, neighbor relations, self-initiative in localities, etc., which in its turn demands higher activity of people as well as determining and culturally directing influence of the larger social environment.

I. ENVIRONMENTAL APPROACH TO SOCIAL ACTIVITY

PART 1. ENVIRONMENT (E) AND ACTIVITY

We have described in our article (VIII, p. 1311-1316) the general psychological and environmental psychological context in the 70s and 80s in the Soviet Union in which Estonian environmental psychology as a theoretical and empirical trend of study emerged, and a respective research group at Tallinn Pedagogical University was established. In this article a more detailed overview of the theoretical models on environment of my good colleagues M. Heidmets (pp.1316-1317) and T. Niit (pp.1320-1321), as well as several other researchers is presented.

In the present dissertation we depart from the model of E which has been presented in the articles (VIII, pp. 1317-1319; III, pp. 51-62). The world that surrounds man is treated as a united integrated whole - the E. Its qualitatively different parts (natural, activity-economical, social and cultural E) are connected by dispositional and determinative relations. Each human being is engaged in the E and opposes to it as a living being, a subject of activity, a social personality and a cultural individuality. According to this model, the dynamic changes in the E are caused by 1) the striving of the active subjects to organize (make definite) the "initial" state of the E, and 2) the elimination of contradictions between organized systems in different parts of the E (III, pp.59-62).

Compared to the traditional models, the environmental approach to the surrounding world has some differences, or more correctly, some advantages. Firstly, it eliminates the term of concrete (or abstract) "object" from the subject-object (S-O) relation, by replacing it with the "environment". Now it is possible to pay attention also to such activity of the subject which is directed not at a certain object which carries many attributes, but at the appearance (disappearance) of certain attributes in many different objects. The E is first and foremost the space of attributes, not of the objects.

Secondly, it enables to eliminate from the S-O relation an abstract (or concrete) subject, replacing it by subject-E (E consisting of subjects) because different subjects have different relations to the same object (as different attributes of that object are vital for them). Thus the relation S-O is replaced by the relation between two "aggregates" of environments, one of which consists of different associations of subjects (which are formed on the basis of their similar interests towards the attributes of the object-E), and the other consists of aggregates of objects (corresponding to different subjects) which carry the different attributes which are of interest to the subjects. Object-E appears to be subjectively defined (each subject has its own E), and subject-E appears to be objectively defined because it represents the relation of many different subjects to the same object.

Thirdly, environmental approach enables to interpret the world as a united whole in which relations between man and E are essentially the same in all different parts of the E. Such identity (commensurability) of relations comes from the attributes of man as a living being which cause identity of his activity in any E. Environmental commensurability enables to set up the question of the degree of man's dependence on the E (DDE) as a relatively constant variable which migrates (growing entropically) from one part of the E to another in connection with the use of qualitatively different means of activity (VIII, p.1319). Rainio (1977, p.458) notes, for example, that measuring the dependence of an individual on E in all points of living environment we can get a "field of dependencies". Wiener calls the "group autonomy" a parameter, which can be calculated comparing the number of decisions influencing the group from "outside" with the number of decisions made inside the group (Wiener, 1965, p.230). Also micro- and macrolevel processes are comparable environmentally (e.g. III on the connections between contradictions in society and in the family E).

The author has tried to build up an environmental theory of social activity which is presented in his articles (IV, V, VI, X, XI) and in Parts 2-6 of the present chapter. It seems that there are phenomena of real human behavior and social life which could be explained by this approach. As any other modelling system (language), this model also distorts and limits the reality to a certain extent, but at the same time it is not meant to exclude or replace other conceptions. On the contrary, evidently the development of human society (incl. social relations) proceeds on several qualitatively different lines, the

description of which requires an adequate theory to each of them. But the essential comparison of biological evolution, cultural development (ethnogenesis), sociogenesis and the development of technology and economy which are all related to a certain human population, is apparently possible only in the framework of environmental approach (see also the discussion related to the theory by Gumilyov, V, pp.30-31). Different theories of action in the social and spatial context are also compared by Werlen (1993).

PART 2. ENVIRONMENTAL INDEFINITENESS AND INFORMATION

The problem of indefiniteness derives from intermediated reception of the external information by an organism. Due to limited transmission capacity of the information channels, living beings cannot exist in an E in which the number or variability of the parameters which have to be observed, is too great (V, p.20; XI, p.10; VIII, p.1318). As the individual has to respond with greater number of reactions to greater environmental indefiniteness, the indefiniteness can be interpreted as his DDE. The dependence on E has been connected with the entropy of dominating system in this E, for example, by Charvat and Kučera (1977, pp.178-181).

This statement is confirmed by the classical studies of Hyman, Hick and Leonard which demonstrate that the average reaction time to an event is in linear relationship with the indefiniteness of the event (or signal). The reaction of an individual to the environmental indefiniteness is an activity which is directed to structure the attributes or qualities of environment into some kind of units or parts. The studies of G.A. Miller demonstrated that the capacity of operative (short-term) memory depends in the first place on the number of stimuli and not on the information they contain. The possible number of environmental units (stimuli) is restricted as well (for example, 7± 2). The perceivable indefiniteness of environment could be thus reduced by: a) discovering the units (or organization) the E really contains (by additional cognitive activity); b) by creating new speculative units in the E (through additional thinking activities), or c) by creating new real units in the E (additional practical activity). The DDE could thus be conventionally treated as average indefiniteness per one unit of the E. This parameter has a maximum

value if the E has not been divided into units successfully, its value is bigger when the units have unequal size or there is only few of them, and smaller when there are numerous units with equal size.

Treating the relations between man and E through (mental, physical, social) activity, we can distinguish three types of environmental indefiniteness: 1) indefiniteness, concerning potential qualities of E as an object of activity (partner of interaction), which is actively and purposefully reduced by man as the subject of activity (by cognizing or influencing the attributes of an object); 2) indefiniteness, concerning E as a means of activity. Activity can be realized successfully only if the means of activity (also human relations emerging in the activity) preserve certain qualities during the activity (tool of work is not deformed, division of labor does not change); 3) indefiniteness, concerning E as the background of activity which expresses potential variability of the essential parameters (concerning the effectiveness of the activity) of the objects (or activity of subjects) which are not directly related to that particular activity.

Indefiniteness of the activity's background is connected not only with possible negative factors (threat) but also with positive ones (e.g. intrusive advertising). Indefiniteness is always a potential quality of the E, appearing of a particular disturbing factor may decrease the indefiniteness (if it is expected with a certain probability by the subject) or increase it (if an unexpected quality is revealed which indicates to the hidden potential of the E).

Decreasing of the environmental indefiniteness for an activity subject can be treated as getting information from the E. There is some probability of appearance of the potential attributes which are excluded when a particular attribute is actually revealed, then it is possible to calculate the amount of information which is obtained as the result of this, using the formula of entropy. The quality of information depends on the manner the corresponding part of the E is connected with the activity:

ENVIRONMENT AS:

	essential attribute	**invariant attribute**
object of activity	excluding attribute	excluded attributes
means of activity	preserved attribute	intermediate activity
background of activity	excluded attributes	excludingattribute

In the object of activity it is important to reach a certain desirable qualitative state and the other excluded possibilities are insignificant (if we do not take into consideration "labor-consuming" character of this exclusion). From the point of view of reproducability of a means of activity, its applicability in the activity is essential (inutile tools are generally not preserved, mended, produced), whereas the concrete content of the activity is not important. In the background of activity these potential disturbing attributes which may emerge in the E, are essential, but not the qualitative character of the particular attribute which excludes them (it may also be disturbing).

In social sciences the term indefiniteness has been used sometimes. For example, Parsons in his theory of social interaction has differentiated seven types of indefiniteness: symbolic (the problem of "common language"), connected to meaning, temporal (incoordination), economic (limited resources), political (mutual disturbing) and motivational conflicts (Davydov et al., 1990). The "capacity" of social perception is restricted by attitudes, stereotypes, experience, learned helplessness, etc. Social perception has environmental character as well, it is established in the process of interaction between individuals and is thus, first of all, a function of the social E. Reduction of indefiniteness (agreement) in the social E produces first of all social information which is related either to an object or to means. The indefiniteness of E as background is first of all to social relations in big groups or outside groups - for example, sequence by Sartre (queue, market) or anomie by Durkheim.

Generally any socially meaningful human activity or state carries also environmental information - information on the stability of social

background and the applicability of social tools in activity. Environmental social indefiniteness and environmental information can also be characterized by invariability of activity (social relations and social systems may function on the basis of any human activity) and subject-related invariability (the social E is constituted first of all by the structure of relations; individuals and groups as its carriers can be exchanged) (XI, p.11).

At the present time, the indefiniteness of the social E is perceivable in one way or another to almost any inhabitants of Estonia. The increasing crime rates, the instability of economical development, changing agricultural policy, the indeterminate social state of large national groups, the unpredictable changes in the political and economic development of the big neighboring country - these are only the most essential examples. Where the probabilities of realization of different "scenarios of development" can be forecasted, the quantitative "power" of the indefiniteness can be calculated. But it is more important to forecast this critical level of perceivable indefiniteness, after which the "excluding" attribute of indefiniteness loses its meaning, and people accept whatever possible solution for the situation (dictatorship, terror, public confrontation, etc.).

PART 3. PHENOMENON OF ENGAGEMENT

Since the environmental information is essential to living beings, they try to seek it actively if possible, i.e. to reduce the indefiniteness of E cognitively or by action. The relation of human consciousness toward the E can be characterized as objectivication (X, p.18) and attribution. We could define the process of pre-determination as an active reduction of potential indefiniteness of the state of E (VI, p.89; XI, p.11).

Predetermination by evoking (supporting) some activity or state in one individual by another which excludes other potential activities or states of the first, we call engagement (V, p.21). If a certain number of individuals each of whose regards the others as the E of its activity, try to predetermine one another by using engagement, then the indefiniteness of the state of this E increases. In the emerged environmental "chaos" the spontaneous emergence of a certain structure of relations is possible (Prigogine, V, pp.18-19) which affords

the possibility of predetermination of all individuals outside the interaction by norming behavior or participating in some joint activity which has labor division or role division. We could add the term of "engagement group" to the classification of the social groups. Unlike in a goal-oriented group, the reproduction of social control and the structure of relations by using any kind of activity is the most important there. The function of "engagement leader" who strives to find engagement activity for group members and to create norms of behavior, manifests itself often in other kinds of groups as well.

Thus, the engagement is expressed in three forms: 1) as a socially conditioned individual activity (which excludes other directions of activity), 2) as an activity or behavior which is regulated by norms created by the social E (group), and 3) as interaction or a joint activity of a group the function of which is to reproduce the social structure. The notion of engagement generalizes thus one essential aspect of social determination through immediate social control, activity, activity-economical relations, and culture. The engagement may (but has not to be) to be related with the use of power (in the meaning of Weber) toward the engaged.

The aspect of engagement in several social phenomena is left without attention, e.g. by existing treatments of the ritual. Along the socializing, consolidating, organizing, etc. functions of the ritual as a symbolic behavior, its activity aspect remains unnoticed. First, performing a ritual is an activity which needs certain physical time (in traditional cultures significant part of the life) during which the participants cannot behave in another way. Secondly, a ritual which encompasses great amount of people, presupposes a certain division of functions (spiritual leader, leader of the motion, performers of the roles, etc.) which could be treated as a part of social structure. In this case the regular repeating of the ritual serves the function of the reproduction of social structure. Thirdly, ritual activity transforms in a certain way also the physical E in which it takes place. The material correlate which conserves the ritual (in the form of buildings, constructions in the nature, etc) may be significantly more stable than the culture which has created it and may influence ritual behavior in the succeeding cultures (V, pp.39-42).

Probably human social associations persist first of all due to the fact that they are means for reducing social-environmental indefiniteness

and they are reproduced on the basis of social activity. This hypothesis is supported by the discussion on the origins of human society (IV, pp.77-83; XI) which departs from the theory of Porshnev (1974). The use of the high level of imitatogenity of biologically inadequate behavior for "engaging" one person by another could be the destabilizing factor (enhancing the indefiniteness), which caused the social organization of human ancestors on the basis of the division of labor. The theory of Porshnev is also supported by the nowadays prevailing point of view about the common African "mother ancestor", and the relatively quick spread of humans to the other continents could be explained by their escaping from the social "chaos". Historical forms of social engagement have also been described in the articles IV and XI, the engagement in the family in III, pp.79-80 and IV, p.69.

Different interpretations of the phenomenon of engagement, including the engagement function of the physical E (which is based on Savchenko's model on architectural space-time - VIII, p.1319-1320) are presented in the article (V, pp.33-39). As Poulantzas has remarked, the reproduction of labor force which is regulated by the state has always a political aim too, because with the help of this social division of labor is reproduced. Social measures and forms of collective consumption which promote the reproduction of labor force in welfare societies have also the repressive function of social control (Poulantzas, 1980, p.186).

According to the theory of solidarity of Durkheim developed by Allardt (Allardt & Littunen, 1975, pp.65-68) the division of labor and the pressure to similarity complement each other as organizers of social relationships. It can be concluded that unemployment is the more bearable the stronger is the social control over norms (mechanical solidarity). In a deteriorating society people demand work (portioning of work) to enable the division of labor to order the society.

Habermas (1981) condemns the increasing institutionalization and professionalization of the society, which "colonizes" the natural interaction and living environment of people. Treating this process as engagement the following aspects could be distinguished (from which each one decreases the indefiniteness of the previous one): 1) the occupiedness of activity functions by institutions and professional roles

(as a socio-cultural function); 2) the development of oppositional roles, institutions and functions - the bipolar stability (cf. VI, pp.90-96); 3) the engagedness of institutions by organizational forms and the engagedness of roles by the secondary roles (cf. Part 4); 4) the engagedness or organizations and roles by particular individuals and their pursuits; 5) the activity engagement of people in the social systems, mental engagement by socially conditioned functional needs and "negative" engagement in the form of learned helplessness.

The term engagement has been mostly used in relation to labor engagement and it is not loaded with another social meaning. Although the principle of activity invariability does not exclude the engagemental character of object-related (useful) activity, we still have used the term "additional engagement" (engagement activity is added to normal human activity) in our articles in order to differentiate it.

The influence of every kind of indefiniteness (especially social) has engaging character for human mind and activity. The states of anxiety, stress, etc. decrease the mental and physical freedom of action (one tends to think and act stereotypically). There are several other activities which are strongly similar to engagement but which have no social origin. They are related to the need of motion of an organism or satisfying sensoric or emotional hunger (e.g. jogging as physical, not a social activity). Berne uses the term "structural hunger" for denoting the need to fill the time with activity or interaction. By satisfying this need he opposes human emotionality to social rituals and games. Although Berne considers symbolic victory or award as the motive for participating in a ritual game, he admits at the same time that "social disapproval accompanies only breaking the rules" (Berne, 1992, p.13). Thus the "structural hunger" in a human group has rather the character of social indefiniteness than individual "boredom".

By engagemental interaction it is often difficult to decide who engages whom - either mother engages her child, by finding distracting activity for a naughty child, or child engages its mother by being naughty in order to obtain mother's attention (reproduction of the social relation "mother-child"). The aim of deviant behavior of the teenagers is often to obtain negative attention of the parents which is accompanied by their engagement by taking responsibility and making decisions for the teenagers (Bayard & Bayard, 1991, p.71). The repetition of the situation leads to the social dependence and mental engagement in the

teenagers. In a certain sense we can also speak of an autogenic engagement when a person starts any kind of activity in order to justify with the help of it for himself or to others the postponement of a certain activity which is unpleasant for him internally.

The influence of presence of other people, social facilitation or inhibition and crowding (cf. Niit, 1983, pp.115-118) on behavior can be treated as engagement when it is a means of decreasing the social indefiniteness (see, for example, urbanization, IV, pp.88-90; Ittelson et al., 1974). We can give an example from the sphere of work, that we can call engaged co-presence: when several men have got a job that only one at a time can do, the others are always "present", too. Engagement is without doubt connected with the demand in bureaus and offices to be present "from the time to the time", although the work could be done more quickly. The attribution of a social acknowledgement or position is often preceded by the demand to achieve the so called engagement threshold - in order to perform some activities requiring time and effort (studies, experiments, ritual acts, etc.) or to stay in some lower position (so called veteran years).

We could use additional engagement of social origin as secondary (synthesized) empirical parameter in sociopsychological studies of the way of life of a family, small communication and goal-oriented groups, school and work collectives and to deal with interaction between groups on any level (starting with neighborhood up to the relationship between nations and states). We can bring forth as an interesting example of engagement problems of the present reality the fact that in spite of predictions the unemployment has not remarkably grown in Estonia. It is probable that the reason here is the transition to market economy in the conditions of great social indefiniteness, that creates an urge in people to be additionally engaged and organized. Another burning engagement problem is connected with shortening of compulsory school attendance and smaller attainability of secondary education - it will probably be demanded from the society to engage graduates from primary schools.

PART 4. ENVIRONMENT AS MESSAGE AND LANGUAGE

Changes of the state of the E could be regarded as messages for an observer (subject) which carry information according to indefiniteness

of E and the qualitative disposition of the observer towards the E. One part of the E may convey messages concerning other, qualitatively different parts of the E (e.g. the discovered things by archaeological studies enable to make judgements on the culture, economy and social life of the people who produced them). For receiving such messages an observer must know the environmental language, the way how environmental phenomena are mutually structurally related. Environmental languages belong to the class of secondary languages and therefore environmental message manifests itself as a text, i.e. at least in two (in the natural language of the observer and in environmental language) codes (Lotman, 1990, p.273). Generally known is the approach to cultural E as a language, a semiotic system. But also other systemic parts of E are characterized as a language: Natural phenomena could not be comprehensible without knowing "the language of the nature", in joint activity people interact using the activity or economic language, and also social E is a certain language which enables people to understand their interrelations.

As any other messages, environmental messages are transmitted with a certain redundancy. Redundancy increases the understandability of the message, its recognizability in the circumstances where only part of it reaches the observer. Redundancy is given by the used language with its structural character (joining signs into "words") on the one hand, or repeating the message during its transmission, on the other. Due to limited capacity of the observers' informational channels, the content and the form (redundancy) of the received message are inversely related: the amount of content can be increased only at the expense of the form (understandability) and vice versa.

Depending on the quality of the E, information transmission has its specificity. The indefiniteness of the natural E in relation to its elements (living beings) is great, a message departs from the E with minimal redundancy. In the struggle for existence, the living being who due to better information processing capacity is able to get more information from the E and give less information about itself, is more successful. In the activity and economic E interactional exchange of messages from a particular sender to a particular recipient is spread, seeking for the optimal level of redundancy and the optimal relation of the content and understandability. In the cultural E messages are transmitted from concrete senders (creative persons, deviating persons or groups) to abstract (environmental) recipient. Due to limited

transmission capacity of informational channels of the sender, cultural message (text) often includes information which has been coded repeatedly and which is entirely understandable only to the recipient who knows the respective languages. The domination of activity messages over understandability has cultural character (meanings, patterns). The domination of the understandability of the activity over the content (the additional engagement) and the redundancy connected to repetition of cultural messages (e.g. repeated performance of a ritual text) are social in their essence. Some authors maintain that the main function of any text is to be the means of social communication (Antipov et al., 1989).

In the social E we deal with the transmission of a message from abstract (environmental) sender to concrete recipient, an individual who participates in social relations. Here the aim is to retain the social channels of communication functioning in the circumstances when there is scarcity of new messages. Constantly the redundancy of the message transmission increases, the structure of social relations itself as the reducer of interpersonal indefiniteness becomes the most important message. The form begins to dominate over the content, language over message. People (subjects) are themselves these "signs" with which the social language as the system of relationships operates, giving them meanings and connecting them with one another into "words" (V, pp.23-24; VI, p.87). But a language can live and develop only if some messages are transmitted by it - without people's joint activity there can exist no social language. At the same time it does not matter at all which are the messages by transmitting of which the language lives. Here again we reach the invariability of activity of the social E: a social system may function on the basis of any human activity.

Reduction of environmental indefiniteness via social and socio-cultural influence on human activity could be illustrated by the following table:

	ENVIRONMENTAL INFORMATION	
REDUNDANCY OF MESSAGE	**SOCIOCULTURAL**	**SOCIAL**
LINGUISTIC	1.Definiteness of the activity	3.Communality (structural) of the activity
REPEATING OF THE MESSAGE	2.Large number of participants	4.Engagement character of the activity

Definiteness of the activity means here a certain definite, yet any optional activity. If a person who is disturbed by street crime would have the ability to influence people's behavior, then he probably would like ... (according to the numbers in the table):

1. that each passer-by would enter as quickly as possible a door (of a house, a car, etc.) or would behave according to a certain model (as a vendor, a jogger, a tourist, etc.).

2. that as many persons as possible would choose the same street or door (it would be then a public place) or the same activity (it would be then a respected activity).

3. that people would move or act together, would be connected by division of functions, would bear the characteristic features of any firm (policeman, repairman) .

4. that each observable person would choose the particular street, door or particular activity as often as possible or would stay behind this door or would be engaged with that activity as long as possible.

When a message originating from one E is transmitted via another E, then it means using the tools of the second E in the interests of the first. The redundancy departing from the first E is accompanied by the

redundancy of the second E as the redundancy of language. The bigger the need for the means from the second E, the bigger is the accompanying redundancy. For example, the more people use social tools (power, position, etc.) for obtaining activity and economic information, the more social redundancy accompanies the messages (reproduction of the structure of social relations). By further increase of the importance of the social E, purely social messages (messages about the language itself) and activity messages with social origin (by which some activity content (E) is used for the transmission of social form), will emerge.

The social message may be diversely coded as well, if we consider the secondary relations (e.g., roles) in a given social relation that restrict additionally the freedom of activity determined by the primary relation (or add engaging activities). The gradual "peeling" of the social message as role (e.g., state official -> party member -> businessman -> mafioso, etc.) could be called the "social derivation".

Treating the activity-economical and cultural E as a possible carrier of some social message enables to interpret the increasing "issuing" of environmental elements (standard mass production, mass construction of housing, production lines, fashion and mass consumption, etc.) as the increase of social determination in the particular society or group.

PART 5. SUBJECTNESS AND SUBJECTIVITY OF THE SOCIAL ENVIRONMENT (E)

There is no general theories on subject in the social sciences. In philosophy and activity psychology this term denotes an individual or a group who acts and cognizes actively in the E, who has consciousness and will, needs and goals; but in social psychology it denotes a social entity or individual who has socially determined needs and orientations and who bears socially meaningful activity or behavior (the key question is the essence of this meaning). In environmental psychology, the problem of subject has been dealt by Heidmets (VIII, pp.1316-1317).

Similar to the approach proceeding from the subject is Coleman's theory of collective choice and decision which he has developed from his "arena theory" (Coleman, 1974). The social orderedness evolves in

the interaction of different corporate actors as a result of exchange of control over events. The events have in turn some influence on the actors.

Preconditions for the emergence of a social subject have been presented in an article (X, p.12). The indefiniteness of the activeness of the subject is perceived by the social E as increasing, it manifests itself as a domain of increasing indefiniteness.

Trying to construct the meaning of the term "environmental subject", we refer first of all to its difference from the term "activity subject" using some key words:

activity subject (AS)	**environmental subject (ES)**
actuality, activity, goal, real, information, social influence, self-consciousness	potentiality, reactivity, means, supposable, indefiniteness, social perception, environmental consciousness

If the "capacity" of an activity subject (AS) could be measured by the scope of the social influence of its activity, then the ES could be described by the scope of social perception, i.e. how great part of the E (from the AS's) perceives it as an environmental subject. The AS is determined by its real and actual activity and its goals, the ES is determined by its supposable activity potential which is achieved by its means of activity. The AS is characterized by behavioral activity which is directed at the environment, the ES is characterized by the reactivity of the environment which follows the activity. The ES can be discovered by the outside observer as the increase in social activity of the AS's in one direction. The AS is characterized by self-consciousness and information exchange with the environment which is based on its needs, but the ES depends on the AS's environmental consciousness, on the extent to which they, each of them separately and all together, are able to distinguish subjects in the environment. It is namely the social E which selects those essential features with the help of which it can estimate the activity potential of an ES, to read its degrees of freedom. Thus, an ES exists when at least one AS (in reflexive case the ES itself) has perceived the increase of its activity potential. The level of subjectness of an ES is

thus conditioned by: 1) the amount of AS's who perceive its subjectness in the E, 2) the number and importance of environmental parameters which have been discriminated by the AS's, 3) ES's supposable number of degrees of freedom when changing these parameters.

The level of subjectness of the social E could be considered now as the property of the E to discriminate in itself ESs with different level of subjectness. The subjectness of the E is thus inversely proportional with the average indefiniteness per environmental unit (ES) (cf. Part 2) and the DDE. The larger the number and the smaller the indefiniteness of the ESs which constitute the social E, the larger is the level of its subjectness. Evidently the subjectness of the E depends on the amount of AS's in it because each AS is a potential ES on the one hand, and the affecter of the level of subjectness of a differentiated ES, on the other. But an AS may not become an ES if it is isolated from the social E or if it is not "noticed" for social reasons (which is in essence the decreasing of the indefiniteness in the E by closing the information channel), and then we are dealing with the phenomenon of "covert" subjectness. At the same time, an ES may emerge also on the basis of an non-existent AS or an AS with considerably lesser potential ("ascribed" or "presented" subjectness) (XI, p.13). The subjectness of the social E may increase also by using inductive cognition where on the basis of some external features of an ES A it is concluded that similar subjects B, C and D are ES's of the same level.

The bearability of the social indefiniteness is largely dependent on the subjectness of the social E. The tolerance toward deviant behavior or way of life, the treatment of indefiniteness as diversity characterizes the societies with high subjectness in which the DDE of people is low. Connecting the social indefiniteness with particular obvious traits (racial, national or religious belonging, etc.) decreases the number of ES's in the society, but increases their indefiniteness toward each other - the threat of conflicts or "overorganizing" emerges. The low subjectness of the social E is always accompanied by additional engagement of people.

By using the concept of ES it is also possible to model the social E. For example, Moreno's conception of "social atom" could be the starting point here (Moreno, 1958, p.102). The internal kernel of the

social E of a particular AS consists of other AS who are ES for him and who himself is an ES for them. Thus we have here a bilateral environmental relation where the participants are interested in the mutual reduction of indefiniteness. External kernel of the social E consists of those AS's who are ES's for the particular AS, and other AS's, for whom the particular AS is ES. Thus we have here unilateral environmental relations. In the external kernel there are also pseudosubjects perceived as such by the AS, who influence his behavior as ES's. The kernel is surrounded by a definite social E in which this particular AS has certain social relations with other AS's. It consists of higher level social subjects or all these groups in which the particular AS participates. Thus an environmental social atom consists of the sphere of interaction, the sphere of engagement and the group sphere, which are surrounded by wider social E which is not directly related to the particular AS. According to the state of this wider E, the composition of the environmental social atom is modified too (see Part 6).

If an ES realizes some of its potential directions of activity (which are known in the social E), i.e., it transforms itself into a real AS, then it desubjectifies itself as an ES, its level of environmental subjectness decreases. The desubjectification may be temporary, partial, connected to some domain of activity. Socially most significant is temporary desubjectification, in which case the activity potential of the subject is preserved or restored at the end of activity. Desubjectification may happen as a result of the engagement executed by the social E or as a result of additional social organization proceeding in the total E. In the last case an ES with the greatest degree of indefiniteness acts often like a negative "kernel" ("Black hole"), for the determination of which AS's in the E begin to do something actively (try to engage the ES), losing part of their potential indefiniteness (environmental subjectness) during that activity. Charvat and Kučera (1977, p. 188) treat this process as acceptance of mutual "roles" by subjects (the ES gains a role of dominating, the AS's - the roles of submissive systems). As the result, the subjectness of the whole E decreases which is actually the function of the social self- organization (VI, pp.86,88). The amount of ES in the E indicates potential freedom of choice, the amount of engaged AS indicates to the realized choices, consequently to the loss of freedom and potential. For example, many young people have to make several forced choices during their educational course under the threat of indefiniteness, and the result is that their real

aptitudes do not develop in their full potential. The school and learning have often only an engaging and socially determining function (V, p.25; VI, pp.93-94).

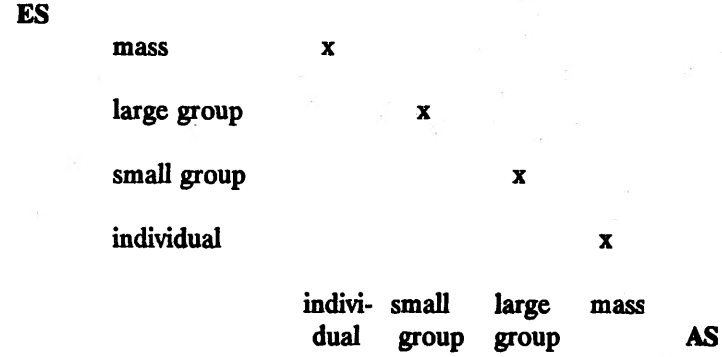
Of course, the subjectness of an ES may decrease also as the result of the cognitive activity of AS's or due to the obtained information from the outside. For example, there is more persons with low educational level among religious people or supporters of ethnic or racial segregation and strong central power. For people with higher educational levels the indefiniteness of the E does not seem so high (due to the higher cognitive capacities and higher social status of these people) that the E would need additional organizing (connecting into larger units). Here a fundamental question arises: to which extent cognition of social phenomena (social self-cognition) is socially useful at all? Maybe the general low level of development of social sciences compared to that of natural sciences is related to social causes as well? Sayer (1984, p.44) proposes that the social phenomena can be understood and explained only through the critique of the self-understanding of this society, taking into account the concept-dependent character and socially-produced character of their objects of study.

In socially induced activity engagement, when an ES is forced to transform itself into an AS, its level of activity subjectness may decrease - evoked engagement activity may, but not necessarily, coincide with the goals of activity of the AS. We define social subjectivity as a deviation of activity from the direction of activity of the AS itself which is related to engagemental desubjectification (X, p.13; XI, p.14). If the subjectness of an ES is "measured" by the social E before exerting the engaging influence, then the subjectivity of an engaged ES as an AS derives objectively from the invariability of activity of the social engagement.

The social subjectivity is characterized by the "extent" of deviation and the "capacity" of expenses or efforts (X, p.10). Subjectivity of the social E could be now defined as the level of probability that the subjective goals of a particular AS may become an objective direction of movement in this E (XI, p.14; X, p.14). Departuring from such definition, the subjectness and the subjectivity of the social E are mutually inversely related: the more there are differentiated ES's in the E, the less is the degree of subjectivity of this E, and vice versa.

Stability of several traditional cultures could be explained by their polytheistic beliefs. Spirits and gods as ES's gave to the social E of these people polysubjective character which enabled to avoid subjective decisions in the activity. As the influence of spiritual ES's on human beings depended on their supposedly higher level of subjectness (supposed indefiniteness of activity), then for the "reduction" of this traditional cultures had to engage themselves strongly in ritual behavior (the "capacity" of expenses). But essentially expressive cultures tend to deviate subjectively considerably less in their development than the expansive ones (Lotman & Uspenski, 1971, p.157; IV, p.76).

Negative correlation between levels of subjectness of AS's and ES's could serve as an illustration to the environmental subjectivity:



A single individual who appears in a crowd, tries to reduce the environmental indefiniteness by imitating the behavior of others. As all the members of the crowd try to act similarly, in the end the behavior of a casual individual will dominate (imitated by everybody), e.g. escape in panic. The influence of a large group on a person realizes via a small group which, being a real group, can exert social pressure. In order to reduce the inner social indefiniteness, the small group adopts the values and goals of a large group (e.g. ethnic segregation, class interest, etc.), it is incorporated into a wider organization (corporations, unions, etc.). At the same time the ideology of the large group is formed or a large organizational structure is led by a concrete small group ("team") which has its own

subjective particular interests and goals. In a society which has low subjectness, the subjectivity of leadership is not reduced by democratic elections because people have no criterion (potential) for making the choice. The self-regulation of a social system brings despite the elections (or with the help of them) to the leading position a subject who guarantees the development of the society towards the decreasing indefiniteness (increasing engagement) (V, p.29).

Material invariability of the social E is a precondition for subjective development of a socially and economically self-organizing socium: it is not important which material tools are used for reproducing social relations. An environmentally self-regulating society has a reckless, lavishing attitude to its resources because AS's operate similarly with great and small material values. By "delegating" the right of using material resources (surplus value, taxes, donations) without direct purpose to higher levels, their rational consumption is replaced by their spending as the criterion of the effective work. The social E is thus also characterized by hierarchical invariability: at all levels of social regulation the social relations have similar character, and the subjects of higher level use the structures of lower level as means of activity. Capitalist subjectivity is analyzed in IV, pp.84-92 and V, p.30.

There are several domains in the contemporary Estonian society where the course of events is largely dependent on how different social subjects perceive the goals and activity potential of each other. We could mention the problems of integration into the Estonian society of the so-called Russian-speaking population, where "ethnic conflicts" emerge mainly between subjects (movements, parties, societies, authorities, etc.) but not in the interaction between people. Similar is the situation in economic life, where the interests of very different socio-economic subjects (government, large and small enterprises, banks, foreign corporations and states, local and international "mafias", etc.) intertwine, and where a lay person is in the role of sufferer (engaged, desubjectivated). The notions of environmental subjectness and subjectivity defined by us would enable after some methodological elaboration to describe, analyze and forecast the situation in the mentioned domains.

PART 6. DYNAMICS OF THE SOCIAL ENVIRONMENT (E)

Desubjectification of each ES lessens the degree of indefiniteness in the E, provides environmental information. But for some AS's the engaging activity of a particular ES (or a position ascribed to him) may prove to be useful, an expected or unexpected possibility to use it as a means for its activity. For example, if a recent millionaire invests his free capital in the textile industry instead of oil industry, then oil magnates have liquidated a potential competitor but vendors and consumers of textile products will get new goods (new profitable information is brought to the market). During the period of the formation of the structure of social relations, when more and more ES's decrease the level of their subjectness, both environmental and useful social information is given to the E. As Coleman declares, the individuals try to maximize the individual utility of the consequences of social events (Udehn, 1987, p.172). As the quality of the information depends first of all on its recipient, then here also namely the state of the social E is important - that is, which is the relation between AS's object-related (concerning its needs) and E-related (concerning lessening the degree of indefiniteness) interests in general and in a concrete ES in particular. At the same time it is clear that subjective directions of development in a society produce numerous pseudo-needs, striving to which has engagemental character to a large extent.

A lot of useful information in the form of unrealized activity potential gets lost in the process of environmental desubjectification. But the loss will manifest itself only in the next phase of social transformation (phase of the fixation of the relationships) when the influx of new useful information stops (the made choices are irreversible) and the socium proceeds along the path of development which becomes more and more subjective. Producing useful information by an AS is at the same time the demonstration of its potential subjectness (being a potential ES) to the E, and the E, reacting to it, may "offer" a certain social position and engagement (job). But concealing its activity potential ("swallowing" information) by an AS is connected with its wish to present itself as an ES of a lesser degree than in reality and thus to avoid social determination and engagement. Social E acts like a special chain of messages which produces new useful information in a certain state but which may also "swallow" the information being in another state (XI, p.14). The cyclic character of informational

processes in the social E has been dealt in a special article (VI, pp.96-100).

Depending on the state of the wider social E, the composition of the subject's environmental social "atom" is changed also (see Part 5). In the period of social formation the sphere of environmental interaction diminishes, being replaced by domination in the sphere of engagement, then permanent group relations appear and the group sphere expands. At last the latter diminishes too - participation in many groups is replaced by participation in one (some) group(s). Social disintegration is characterized by the reverse process - when groups disintegrate, the need for personal engagement appears, attempts of mutual engagement lead to environmental interaction, the kernel of the atom expands.

Influence exerted by the social E on human activity can be considered as a special social force which cannot be directly derived from the relations between activity and other E's (from natural, economic or cultural causes). The dependence on social E as a source of the social force is also discussed by Charvat and Kučera (1977, pp.184-185). This force is quantitative in character because it depends more on the environmental indefiniteness (number of degrees of freedom) than on the potential qualities of the E which produce the indefiniteness. Its quantitative character creates a precondition for its use both in socially negative as well as positive (humanistic) direction (XI, p.15). An example of the latter may be the home- and cleanliness-centered society in the Netherlands in the 17th century (Shama, 1987, p.380). Negative implementation of the social force is related to 1) social subjectivity (social influence on the activity E, natural E and cultural E), 2) the increase of additional engagement, 3) loss of potentially useful information in the process of desubjectification, 4) "swallowing" the actually useful information in the social chain of information. Subjective social influence on culture, for example, leads to the loss of human dimension in the latter (by becoming less understandable and standardized, etc.) (see IV, pp.74-75).

Thus the environmental approach enables to treat social determination as a specific influence on activity which emanates from the social E itself and which through this influence affects other E's also. Beside the problem of the quality of the social E as a means of activity (correspondence to the needs) we may also see now the quantitative

problem of the possibility of its reproduction (existence), for which activity serves only as a means in its turn. History is created not only by concrete persons (rulers or masses of people) or Man (mankind) in a generic sense but also by the social force which amplifies and realizes subjective strivings of people.

Thompson (1987) distinguishes power at the level of action as the potential capability of the subject to act and change the course of events according to its goals on the one hand, and at the institutional level, on the other hand, as the capability to authorize some human groups to make decisions and to implement them. In the first case, the power could lead to environmental subjectness, in the second case, carry the potential social force.

If we apply the principle of entropy to the sphere of social life of the humans, then we may declare that a human observer can observe only such forms of social life in which a human being can exist. At the same time we cannot assert that the social forms so far realized during the human history would exhaust the whole totality of possibilities. Thus also "*the sum over the histories*" (an expression by S.W. Hawkins) or comparative historical method cannot give all the criteria for evaluating the social development. Environmental approach enables to avoid the necessity of qualitative (departuring from an ideal) social evaluations. It poses the questions concerning 1) the optimal level of social self-organization in particular environmental conditions which would guarantee maximum possible social subjectness, minimal level of engagement and loss of information, and optimal level of environmental indefiniteness, which in its turn, means the minimum level of necessary social force for the reproduction of the system; and 2) optimal social force (stimulation) which is necessary for the development of a person into a biological, economic, cultural and social being of full value and for his participation in the social life. It is also the question about the minimization of the DDE, or effective size of the group necessary for acquiring a certain level of "autonomy" (Wiener, 1965, p.230).

Social self-regulation is directed at the reproduction of the system with a certain redundancy for which an additional social force and environmental indefiniteness are needed. The subjective progress of science and technology (XI, pp.13-14) is the reproducer of indefiniteness on the macro level of activity E and economic E and the

social force is an accelerator of this. On the medium level of regulation indefiniteness is produced by the change of activity potential of subjects as the result of redistribution and accumulation of capital, uneven distribution of useful information and social subjectivity (X, pp.20-21). Different misdevelopments and destructions of social character in the physical and mental activity E should be understood under the latter (unnecessary facilities, war destruction, urbanization, attitudes created through the mass communication, etc.). On the level of an organization the indefiniteness is reproduced by replacing the staff by more educated and capable persons. It is possible that fostered development of elite education is related to social self-regulation (already in the traditional cultures the "learned and dedicated" men were opposed to lay people, increasing at the same time the level of subjectness of a particular cult and the whole society). The social deterioration (together with anomie and deviant behavior) creates the indefiniteness first of all at the level of human contacts (relations) and can be decreased only by the emergence of the subjects of an higher level (ESs). Increasing the individual subjectness of people (giving land to peasants, privatization, etc.) is usually a (temporary) result of struggle or agreement between the social (political) subjects of higher level, which has the function of reproduction of indefiniteness (competition) in society.

To forecast the emergence of new social forces and the possible subjectivity of applying the existing ones in some domain of social life, the subjectness of a particular social E should be studied through a conventional ratio "number of ESs / number of ASs". The larger this ratio, the stronger the social force that could release as a result of self-organization, and the smaller it is, the more subjectively can the social forces act. In elaborating the particular formula, other above-mentioned parameters (the degrees of freedom of the subjects, etc.) should also be taken into account.

Although the scope of influence of the social force cannot be determined, and it may seem that it emerges and has its effect first and foremost on the level of large groups and society (several above given examples also refer to this), its effect is to a large extent related to small groups and individuals as real subjects. The social force appears thus to be a social psychological phenomenon because the precondition for its emergence is the limited capacity of (social) cognition and social indefiniteness of the activity E of a subject. Any

kind of social orderliness (control, structure) which has emerged on whatever level (e.g. on the level of a state) is considered first of all as the reduction of indefiniteness by a person (subject) in its actual sphere of activity and interaction.

II. STUDIES ON THE RELATIONS BETWEEN WAY OF LIFE AND LIVING ENVIRONMENT

One of the most vivid expressions of the subjective deviation of the social force is the living E in new urban living districts, where millions of people have to "receive" continuously the social "messages" concealed in the concrete and stone. If the ancient Egyptians constructed their pyramids in the hope that the Pharaoh awakes into life again, our contemporary "sleeping districts" are constructed in the hope that people living there do not "awake" so soon. In the environmental design which does not proceed from the needs of inhabitants, neither the understanding of scientists, but rather from the doctrine of functional concentration of the city and the "economy" of construction technology, has a strong destructive influence on the way of life of people and social relationships in the neighborhood. We do not deal thus with a material or architectural, but first and foremost, with a social problem. The solution of this problem depends mainly on who are the social subjects into whose sphere of interaction the housing construction and management remains. The strength of the resultant social force is dependent on the indefiniteness of relationships related to the living E between the subjects. The direction of the force is dependent on how much the subjects representing the interests of the inhabitants participate in the interaction. An embedded and conceptualized subject focus for housing studies can play a decisive part in reintegrating housing research into social theory (Kemeny, 1992, p.169).

To find out the influence of social and environmental circumstances on the way of life of people, the real (environmentally unsatisfied) needs, and the environmental means and changes which could direct the development into a more humane direction, we have carried out

several theoretical, methodological and empirical studies. A short outline of these will be presented.

PART 1. SUBJECTS AND METHODS

The analysis presented in the articles I, III , VII and IX, is based on five studies on the environmental way of life of families which were carried out with the participation of the author in 1971-1985 (IX, p. 149). The first encompassed only Estonian families, the others - families from cities of different regions of the former Soviet Union.

Home as an integrative whole of the social and spatio-physical activity E which is psychologically closest to man, was the point of departure and the central concept in these studies. Activity is a unit of way of life as a dynamic system. For the description of activity, a standardized set of features characterizing the real or desired activity in the E, was elaborated. Methodologically important was the abandoning of measuring the duration of activities which is widespread in the so-called "leisure studies" (as the perception of time is dependent on the character of activity), and switching to fixation of the frequency of activities. The system of these features is presented in the articles (IX, p.150-151; I, p.49-57). An example of the methodological work relate to parallel studies is the article (II) on the validity of the scales of the semantic differential where it is shown that polar rating scales with a zero at the center should be replaced by two separate multiplicative scales. Hertzberg's theory of two factors of satisfaction could be applied to living E also, according to Donnelly (1980).

In the first study the families were chosen representatively from ten types of settlement in Estonia, in the other four studies the families were chosen on the principle of directed sampling (the method is depicted in the article (I, pp.45-49) from standardized types of housing in the new housing estates. All the studies were carried out, using the method of formalized interviewing, the data were automatically (or later selectively) coded in the questionnaire and were computer analyzed. The general scheme of computer analysis which consisted of 17 stages, is presented in the article (I, pp. 58-66). In addition to the methods presented there, in later studies other methods like clustering of activities according to a given criterion (IX, p. 169), clustering of families using the method of uneven distribution of features (IX,

p.170), forming typology of rooms according to the combinations of activities occurring there, etc. were used.

In the context of the present work the practical measurement of the indefiniteness of the use of kitchen and living room and of the types of domestic activities should be emphasized (IX, pp.165-167). We have to deal with the objective (observable) diversity, which has a positive value above all in the cultural sense. To discover the social indefiniteness (DDE) we should compare the number of types of the way of life distinguished by people themselves with the typology of ES's in the living E.

Several results of our studies have been confirmed by studies carried out in the West (cf. Lawrence, 1987; Altman & Wandersman, 1987), an overview of which has been published by our research group (Raudsepp, 1986, 1988), as well as in the publications of the City Laboratory at Tartu University and Tallinn Institute of Urban Research whose study results from 1988 will be presented below for comparison.

PART 2. RESULTS

1. Connections of the way of life as a whole with the E. According to the results of the first study the interrogated families were clustered into seven types of environmental way of life (IX, p.152), of which the first four were most often found in bigger cities, the fifth in small towns and the last two in rural settlements. General distribution of the types is as follows: 1st - 9%, 2nd - 19%, 3rd - 14%, 4th - 8%, 5th - 12%, 6th - 14% and 7th - 23%.

In the article based on the results of the third study (III), an attempt is made to demonstrate that it is not concrete environmental conditions (like the size of the apartment, relations in the family, etc.) but the reflection of the contradictions of the wider metaenvironment (see the figure in III, p. 60) in the domestic life arrangement, which influence the family way of life in urban conditions.

This publication is also an example of the application of the environmental model proposed by us in the interpretation of data from empirical studies. The changing roles of men and women in the

urban home discussed in this article (III, pp.70,76) and conflicts related to it are noticed by several other researchers as well (cf. Kortteinen, 1982).

2. The height of dwellings. High dwelling houses form psychophysiologically and socially unfit E. More than 80 per cent of the interrogated families would like to live on the 2nd to the 5th floor of the houses (studies III, IV and V). The first floor is unpopular first of all due to the unprotectedness of the surrounding territory in new housing estates. The negative factors connected to the living on the higher floors have been presented in publication VII, pp.138-139. Gillis (1977, p.422) concludes that "women living on the ground floor have higher rates of psychological strain than have their higher living counterparts. The linear relation between floor level and strain, then, holds only for women in dwelling units located above the ground floor". According to some authors (Conway & Adams, 1977), the last floors are preferred by single persons and families without children due to their privacy, quietness, good outlook, etc.

3. Size of dwellings and the neighborhood (IX, pp.158-160; VII, pp.140-142). Number of flats in a house (in neighboring houses around the same courtyard) should be much smaller than it is now. Among the residents of big houses 40-45% would like to live in a big house, 33% would like to live in a house with fewer flats and 20% would like to live in a single-family house, if they had a choice (studies IV and V). More recent results of the studies in Tallinn (1988) indicate that there are also ethnic differences in the preferences: in single family houses would like to live 49% of Estonians and 28% of Russians; in houses with few flats would like to live 41% of Estonians and 30% of Russians; in big houses with many flats would like to live 6% of Estonians and 31% of Russians. Our research data demonstrate that residents of big houses have few contacts with their neighbors in the house not in the absolute sense but compared to the total number of families in the house. According to Crabbe & Alexander (1980) the difference is revealed in the number of acquaintances in neighboring houses (residents of high buildings have on the average 1.2 acquaintances, residents of 3-4 floor-houses have on the average 2.4 acquaintances in neighboring houses). Such situation is caused by residents' alienation from their living E, on the one hand, and causes this alienation, on the other. Optimal size of urban neighborhood for Estonians could be 20-40 (maximally 60) families (flats).

4. The territory pertaining to a dwelling should be separated from the surrounding environment (IX, pp.156-157; VII, pp.142-144). Spatially closed territory around the house is more often perceived as one's own courtyard (study V). In open, unmarked areas between the buildings people spend less time outside, they feel themselves less secure there, they do not identify themselves with such place and they do not defend such place. In a commonly used courtyard, there should be psychologically suitable spatial possibilities for formation of activity and interaction places, both for different age categories of residents, and for common use of all. The main principle of forming the living E should be its unfinishness, the possibility of adding new elements and of transforming it, which promote its acceptability for the residents and enables their social integration in the process of activity.

5. By designing living quarters it is advisable to renounce from the so called free planning principle, come back to the network of streets and courtyards (the dialectics of "street" and "courtyard" has been dealt by Mikhailov, see VIII, p.1317). Urban living E should be organized on the social, not functional basis. Each community (starting from the family) would then be the subject of formation and use of its territory (space) (cf. Heidmets, 1988, pp.41-44). Thus a naturally varied, stable, socially developing and cooperatively hierarchical living E will emerge (VII, pp.146-147). Environmental factors can only decrease the dissatisfaction with one's place of living, satisfaction is increased foremost by social factors (Donnelly, 1980).

Commonly used areas should be spatially more closed than private places in order to compensate the decrease of social control (courtyard should be surrounded by dwelling-houses, the square should be located in the center of a living quarter, not at the crossroad of highways). No empty space (territory) should be planned into the living environment which with its social indefiniteness would repel people or would cause asocial behavior. The sphere of public life (relations between strangers) depends more on the physical E than the private sphere (Lofland, 1983). In the center of a living quarter the density of catering services and cultural facilities should reach its maximum, the market-place, etc. could be located there.

One practical possibility for designing the living E according to the forementioned principles is depicted on the **Figure**. The dwellings in the neighborhood are located around a common courtyard, every

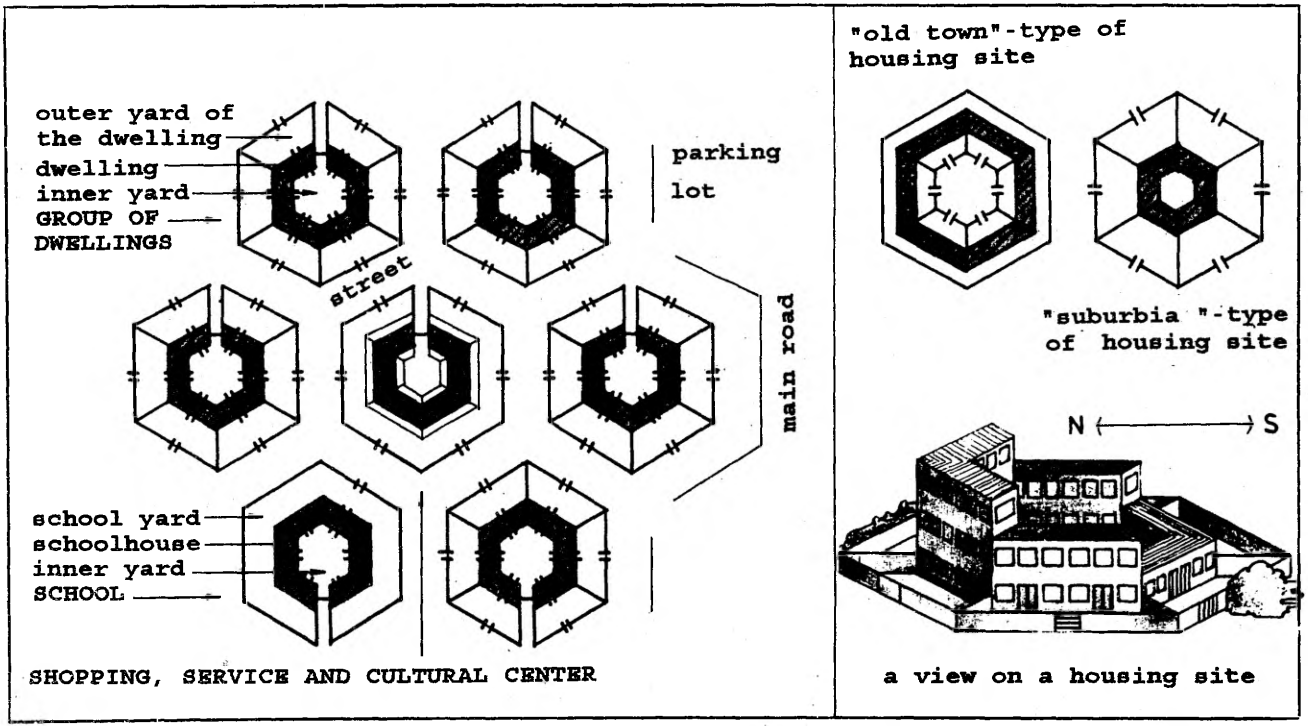


FIGURE. A HUMANE NEIGHBORHOOD COULD LOOK LIKE THIS

dwelling has also an outer yard surrounded by fence, which the inhabitants themselves turn into greenery. Locating the dwellings close to the street we will create an "old town"-type of housing with spacious inner yard. Leaving large outer yards will result in "suburbia"-type of housing. The dwelling groups are arranged in a honeycomb-like pattern around the shopping, service and cultural center. The winding streets create a psychologically secure closed space. The inner streets should have restricted car traffic. The main roads and parking lots should be located at the outer boundaries of the housing site. Based on similar principles, a schoolhouse with an inner yard can be designed, surrounded by a schoolyard which is maintained by the students; or an industrial enterprise, which is separated from the residential site with green belt and gives the possibility to create workplaces close to home. Dwellings and buildings have different spatial and finishing solutions, according to the wishes of the inhabitants, which, together with greenery, create an original milieu.

6. According to the study of Tallinn families (in 1988), in **choosing and evaluating one's flat** the main criterion for 52% of Estonians was its location (garden suburbs and older housing estates were preferred), for 28% the main criteria were conveniences in the flat. 58% of Russians and residents of other nationalities considered flat conveniences and 18% the location of the dwelling as the most important. Only 14% of the both ethnic groups placed the size of the flat and number of rooms on the first place. The minor importance of these factors have been confirmed by the data of our study as well (IX, pp.162-165) according to which satisfaction with one's flat drops considerably only when the number of rooms is two units less than the number of family members. Necessary number of rooms for a family depends on the type of its way of life (number of domestic activities which require room) on the one hand, and on the type of social relations between the family members, on the other. Residents can be satisfied by relatively small flats due to scarcity of productive activities in their urban homes. Necessary number of rooms is determined mainly by the need of personal rooms in the family. In an urban flat this need is increased not only by psychological need of privacy but also by social rejection (flight) which is caused by the decay of domestic division of labor (which structures family relations) due to insufficiency of joint activity of the family members.

7. The character of social relations in a family is characterized also by acting "together" or "separately" at home. In a more urbanized living environment people tend to be active at home each one "separately" (and to wish more smaller rooms in their flat), in a less urbanized E people act more often "together" (and wish less but bigger rooms) (study II, in I, pp.76-77). Actual number of rooms in a flat correlates positively with the number of actions performed "separately", size of the flat (area) correlates positively with the number of actions performed "jointly". In the case of rooms giving access to another there are less "joint" actions than in the case of isolated rooms. "Joint" activities at home are more common in the cities of the southern regions of the former USSR, "separate" activities are more common in the western region and big cities where the influence of urbanization on the way of life is greater (study III, in IX, p.168). The tendency to act "separately" increases the variety of use (indefiniteness) of the common rooms (kitchen, living room) at home. Great number of activities which occupy the whole room at the same time decreases the variety of spending spare time at home. Departuring from this we may make an indirect conclusion that the privacy of family members in domestic activities is socioculturally positive (increases variety of homes) only so far as it does not occupy the whole room. Personal distribution of rooms is related to more homogeneous way of life (study III, in IX, p.167).

8. Way of life of a family is characterized by the tendency to perform activities "at home" or "outside home" (in the service sphere). The number of outside home activities of a family and their average frequency are negatively correlated. In a living quarter relatively few types of services are used with greater frequency, in central town, greater number of services with less frequency are used. With the improvement of living conditions the number of outside-home activities of a family increases (it may be connected also with the disappearance of the activity-inhibiting influence of crowding), their average frequency drops (study II, in I, pp.68-72). Average number of activities performed out of home compared to number of activities at home was relatively greater in the cities of Ukraine and the Baltic republics, it was on the medium level in the cities of Russia and relatively smaller in the cities of southern regions.

When the number of rooms increases (in relation to the number of family members), the variety of functional activities at home increases and the variety of spare time activities decreases. Thus the homes of the families living in better flat conditions are differentiated most of all just by the combination (type) of functional activities (study III, in IX, p.166). Departuring from the data of our study III we differentiated 16 types of way of life on the basis of frequency and location (at home/outside home) of having meals, other functional activities and spare time activities (IX, p. 170). Most uneven groups were formed on the basis of out-of-home functional activities (25% used service facilities often, 75% - seldom) and spare time activities at home (75% spend often their spare time at home, 25% - seldom). Families are moderately differentiated by out-of-home spare time activities and having meals out of home; the most differentiating are functional activities and having meals at home (here the amount of those who perform them frequently is almost equal to those who perform them seldom).

Contrary to the conception of the "socialist way of life" which attempted "liberating" the persons from the burden of functional activities and appraised the "cultural" side of leisure, we have concluded on the basis of our data that endurance and development of the home in the city (and, of course, in the countryside as well) is related mainly with the increase in domestic functional activities and cultural differentiation. One the one hand, it means the increasing of the role and the polyfunctionality of jointly used spaces at home. Thus, according to the data of study III, the larger variability in the use of kitchen was related to lesser need for separate rooms and vice versa (IX, p.167). From the families included in study IV, 8.6% wished to have a small kitchen for preparing food only, 64.5% - a bigger kitchen for preparing and eating food, and 26.1% - a large room for preparing and eating food and informal living. In the real use of kitchens (according to the data from study III) the prevalence of social-spatial activities over the individual-functional ones is evident (IX, pp.163, 169). Lawrence also indicates studying the renovation of English homes that the dining-kitchen has been, and still is, the center of family activities, irrespective of changes in the plan arrangement of the house (Lawrence, 1987, p.260). On the other hand (Ibid, p.267), the development of home is based on the disappearance of clear gender roles (which hinder the polyfunctional use of rooms), the participation of the whole family in functional activities and the division of labor

related to it. Nowadays, that the mass construction of housing has almost stopped, the aforementioned tendency should be taken into account in renovating the existing housing stock and in cooperative and individual housing construction.

The methodology for studying the family's way of life elaborated by us is sufficiently universal to be used in the conditions of changed environmental relations as well. A new study of Estonian population should be planned in the near future when the process of privatization of flats is finished and the forms of management of high-rise buildings have taken shape.

9. The participation of inhabitants. According to the widespread conceptions in the West, the quality of living E is not in congruence with user needs as the understanding of good E differs between the users and designers of the E. Kernohan et al. (1992, pp.7-20), e.g., describe the differences between two groups of subjects - "users" (occupants, visitors, owners, tenant organizations) and "providers" (makers, traders, landlords, lessees, maintainers) - as two different cultures (cf. **Table**). The solution is seen in group participation of people invited from among users to model and evaluate the E. The participation of inhabitants in designing their living E has been tried to stimulate and study in Israel (project Renewal). The researchers conclude that the process of participation is socially as important as its result. No difference was found between participants and nonparticipants in the majority of attitudes toward the neighborhood (Churchman, 1987, p.137). The Cooperative Housing Action Program (CHAP) in Alberta is an example of users becoming actively involved in the housing process. A definite improve would be a design initiated by the user with a modelling kit representing a manufacturer's building system (Bentz, 1988, pp.75-78). In our opinion, the users of E could be involved in environmental design first of all through the social E, which enables in addition to presenting their values and needs also to influence the decisions about the design of living E.

10. In the article (IX, p.171-173) we have presented a number of characteristics (together with the causes and spheres of their manifestation) for **estimating the quality of the living E.** It seems that with some additions they could be used also in the changed social conditions. For comparison, we present functions of the living E and their preconditions, presented by (Richman, 1979): 1) security -

Table. Cultural differences: comparison of Providers' and Users' attitudes and beliefs with respect to facilities (from Kernohan et al., 1992, p.17).

Attribute	*Providers*	*Users*
Quality: what makes a good facility	Formal and technical qualities and properties of a facility as an artifact, e.g. how it 'looks', or how assured 'the idea'	Relation between a facility and activity, e.g. how it 'works' in relation to intended activity and perceived needs
Finance: who pays, and (as perceived) for what	Receive money (directly or indirectly from users) for technical or professional advice/services in provision and maintenance of facility	Pay money (directly or indirectly) for using facility
Market forces: roles, values	Supply-side role. Increasing competition with other suppliers, but still a tendency to wait for demand to make itself known	Demand-side role. Gradually increasing a critical outlook in a 'buyer's' market, but still tend to take what is offered
Activity in relation to facility	Work *on* facility: work/career exists because of facilities	Work or live *in or with* facility: facility exists because of work or other activity
Reality: view of the 'real world'	View of reality acquired and maintained through professional training, associations and traditions, resulting in specific and predictable way of thinking and acting	View of reality based on direct experiences in operating in facilities; little or no formal training or knowledge about facilities; see facilities as 'background' to daily operations
Language	Technical: often jargon; narrow, precise vocabulary	Non-technical, loose, diverse, idiosyncratic
Knowledge base	Received, formal, documented; combination of education and professional experience	Experiential, informal, not documented
Perceived value of own and others' knowledge	High value attached to own knowledge and experience: 'we know best'; low value attached to users' knowledge	Low value attached to own knowledge and experience; moderate or high anticipated value attached to providers' knowledge: 'they must know best'
Self-image	Confident of value and correctness of own views and knowledge; self-image of 'expert'	Uncertain of value or correctness of own views; defer to 'experts'
Power to decide what is provided, to what quality	Considerable, derived through direct action, assigned or assumed authority based on expertise	Minimal, almost no participation in design decisions during the delivery stages of a facility; power limited to 'take it or leave it' points of decision

physiological comfort, availability of resources (stores, catering facilities, etc.) near home; 2) safety - stability and structuredness of the E, visibility and control of transport, possibility to separate oneself, small size; 3) child rearing conditions - low-rise dwellings, quality of neighbor relations; 4) identification, attachment to the place of residence - preservation of old houses, uniqueness and aesthetic qualities of the E; 5) social interaction - common territories, similarity of residents; 6) participation in local life, collaboration with the neighbors - environmental activity, recognition; 7) recreativity - places without transportation, facilities for sport and games for different age categories.

The value of the few studies on the way of life which could be carried out in the former USSR is not so much in reflecting a failed social experiment but in being studies on a certain trend of E formation (which has spread also in the West, i.e. construction of big dwelling houses, based on the conception of Le Corbusier) which was realized extremistically and incompletely, but in large scale. Suburban housing estates carry problems also to our nearest neighbors (see e.g., Kortteinen, 1982) and people have to continue living in our big dwellings for some time. Social psychological or environmental psychological studies could conduce to the humanization of the existing man-made living E, but of course, only if there is respective societal demand.

The premise for the change in the living E is the increase of the subjectness of social E - the emergence of several equivalent ES's related to the locality in the form of the family,neighborhood community, societies and associations related to the locality, etc. The privatization of single flats in big dwellings, as it is taking place in Estonia now, does not turn the inhabitants in the subjects of environmental design even through the compulsory formation of housing co-operatives. The social force is liberated only in the case of voluntary association of real owners (who can sell, rebuild, etc. their property) and changes the E into more humane direction in the case of emerging of relevant culture.

CONCLUSIONS

1. The world surrounding the human being can be conceived as homogeneous environment to which he is bound through the general degree of dependence of activity on environment (DDE), that can be understood as the relation of the amount of the individual´s reactions to the amount of the changes in environment. The DDE migrates entropically through means of action from one part of society into another, it enables to describe the interrelations between natural, activity-economic, cultural and social environments and their influence on action.

2. The perceived indefiniteness of the condition of environment depends, on the one hand, on the amount of essential events taking place in the environment and of their predictability, and on the other hand, on restricted ability of an individual to cope with indefinite situations. Indefiniteness can be reduced by means of cognitive or practical organizing of environment into units of limited number (into more or less structured domains). In this case the DDE can be interpreted as average indefiniteness of environment per each distinguished unit. In the environment it is possible to distinguish indefiniteness (dependence) connected with the object, means and background of activity and to postulate active, subjectual, material and hierarchical invariability (qualitative independence) of the condition of social environment.

3. The social reaction (activity) directed to decrease of environmental indefiniteness, that evokes additional activity (or states) of individuals, can be conceived as their engagement. The notion of engagement enables to generalize an important aspect of social determination operating through social control, socially conditioned activity, economic relations and culture and it can be applied to explain several micro- and macrosocial phenomena (including the formation of human society).

4. The decrease of indefiniteness in environment can be treated as information for individuals, the environment itself can be interpreted as language and message, that carry the information. Thus we can compare qualitatively different parts of environment quantitatively with the help of such parameter as the redundancy of forwarding messages.

The redundancy of the social environment as a language and the redundancy of social messages is considerably bigger than in other environments (cultural, activity-economic, natural environment). The influence of social environment as a language on other environmental languages is expressed by the increase of their redundancy.

5. It is possible to treat the domain of the increase of indefiniteness as a unit of social environment and to connect it with the notion of environmental subject (ES). In this case the social environment consists only of such (real or imaginary) subjects, the potential indefiniteness of whose action is perceived as big or growing. Such specification enables to define the subjectness of the social environment as ability to distinguish more or less ES's in itself and to consider decrease of indefiniteness (as the result of cognition, engagement, self-regulation, etc.) in some parts of it as desubjectification.

6. The deviation of some activity caused by social influences from some objective (i.e. determined by natural, activity-economical or cultural environment) direction can be described as social subjectivity of activity. The subjectivity of social environment can now be interpreted as the probability that personal goals of an activity subject (AS) could due to the great social subjectivity change into an objective direction in this environment. Such approach enables to predict through the degree of subjectness of social environment the degree of social subjectivity of the group (society) observed and vice versa, since these indexes are in negative correlation.

7. We can treat the reproduction of actual or potential indefiniteness in the environment as a basic mechanism of social self-regulation. Thus self-regulation does not mean a voluntary union of individuals into a social community in order to meet their needs in a better way, it is rather creating constant need for an organization regulating their relations. The real social environment is formed not by fixed social relations in a group (society), but by relations of indefiniteness between social subjects serving as background.

8. The character of informational processes taking place in other environments depends on the cyclic change of indefiniteness (subjectness) in the social environment. In the phase of forming of social relations characterized by decrease of indefiniteness of the

environment, generating the information by subjects prevails, expressing thus their social desubjectification. Accumulating of information by subjects, its disappearance from circulation is characteristic of the phase of fixed relations, which is characterized by low subjectness of environment. The decline of social structure is accompanied by editing information in order to still satisfy the "information hunger", and increase of environmental indefiniteness on the basis of accumulated information.

9. The influence of the indefiniteness of the social environment on human activity can be interpreted as a quantitative social force, that due to the social invariability of activity can apply itself both in humane and antihumane direction. Achieving humane social development is not connected with qualitative "management" of the society, but also with the quantitative means - by the way of increasing subjectness of the social environment and decreasing the subjectivity.

10. The activity redundancy and subjectivity of social self-regulation enable us to raise the question about the optimal level of self-organizing in given environmental conditions and the minimal social force necessary for reproduction of the system (minimization of the DDE). According to the things mentioned under the previous paragraph it means such social environment where maximum environmental subjectness (the number of ES's) is connected with minimum environmental indefiniteness (there cannot be subjects with higher potential indefiniteness in the environment, that could become centers of excessive social self-organizing). Natural circumstances, cultural, economic and social relations, that foster the potential concentration of the means of activity at the disposal of few individuals (subjects), are principal reasons for the social redundancy of activity and subjective social developments (social determination).

11. Formation of the modern (urban) living environment and way of life can be treated as the result of subjective social processes of society, that does not meet the real needs of people. Inhabitants have had no chance to participate in creating their living environment and the way of life, the change of the last mentioned into a humane direction can be achieved only through changes in the social environment.

12. In order to confirm the abovementioned conclusions we used the materials of five studies carried out with participation of the author about environmental way of life of families (both Estonia and several towns of the former USSR were included). These studies are based on a common methodological conception, that enables to consider the way of life as a system of activities in domestic and non-domestic environments.

13. Connecting the way of life as a whole with the (natural, activity-economic, cultural and social) environment shows that neither of them is directly the inducer of each other's condition, they both depend on the condition of wider meta-environment.

14. The studies mentioned and the works of other authors enable to demonstrate that:
a) the present industrially produced urban dwelling houses are too high and large, and to ground the sociopsychological needs as to the height of dwelling houses and the size of the neighborhood;
b) the territory belonging to the dwelling houses needs marking and furnishing, and the so called free planning needs to be replaced by design of living quarters;
c) the present functional zoning of a town could be replaced by a socially hierarchical polyfunctional environmental self-organizing.

15. These principles enabled to create a model of humane structure of the living environment, that has been presented in the present dissertation (see Chapter II, Part 2).

16. Associating the needs connected with the apartment and satisfaction with one's apartment with the changes that have taken place in the way of life of a family demonstrates that an apartment where the number of rooms is equal to the number of the members of the family or with one room less, is considered the most suitable. Relatively small number of the rooms desired can be explained with decrease of domestic functional activities in an urban apartment that leads to
a) the decrease of the need for the rooms connected with work and practical activities;
b) the need for separation (an attempt to separate into one´s own room), that is connected with the increase of social indefiniteness due to the decrease of common activities and division of labor.

17. The reproduction of the home as a humane living E and the family as an environmental social subject presupposes the increase of the role of domestic functional activities and of cultural differentiation together with the changing of the apartment toward larger jointly used rooms.

18. The humane social development of the city presupposes:
a) the emergence of subjects designing the near-home environment in the form of neighborhood (as a community) and different associations and societies joining the families of the living area of quarter;
b) equal involvement of inhabitants' associations, apartment and house owners, shops, enterprises, educational and cultural institutions, district councils, and other subjects in the social E of the city and decisions concerning the environmental design of the city. In the city council, the environmental subjects of the city (interest and power groups), rather than national political parties should be represented.

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INIMTEGEVUSE KESKKONDLIK JA SOTSIAALNE MÕJUSTATUS

KOKKUVÕTE JA JÄRELDUSED

ENVIRONMENTAL AND SOCIAL INFLUENCE ON HUMAN ACTIVITY (SUMMARY)

1. Inimest ümbritsevat maailma saab käsitleda ühtse keskkonnana, millega teda seob tegevuse üldine keskkonnast sõltuvuse aste (KSA), mida võib mõista kui indiviidi reaktsioonide hulga suhet keskkonnas toimunud muutuste hulgasse. KSA migreerub tegevusvahendite kaudu entroopiliselt ühest keskkonna osast teise, tema abil on võimalik kirjeldada loodusliku, tegevus-majandusliku, kultuurilise ja sotsiaalse keskkonna vastastikuseid seoseid tegevuse mõjustamisel.

2. Keskkonna seisundi tajutav määramatus sõltub ühelt poolt keskkonnas toimuvate oluliste sündmuste hulgast ja ootuspärasusest, ning teiselt poolt indiviidi piiratud võimest toimida määramatutes oludes. Määramatust saab vähendada keskkonna tunnetusliku või praktilise organiseerimise teel piiratud arvuks ühikuteks (rohkem või vähem struktureeritud piirkondadeks). KSA on siis interpreteeritav keskkonna keskmise määramatusena temas eristatud ühiku kohta. Keskkonnas on võimalik eristada tegevuse objekti, vahendi ja taustaga seotud määramatust (sõltuvust) ning postuleerida sotsiaalse keskkonna seisundi määramatuse tegevuslikku, subjektuaalset, materiaalset ja hierarhilist invariantsust (kvalitatiivset sõltumatust).

3. Keskkondliku määramatuse vähendamisele suunatud sotsiaalset reaktsiooni (aktiivsust), mis kutsub esile indiviidide täiendavat tegevust (või seisundeid), võib käsitleda nende hõivamisena. Hõive mõiste võimaldab üldistada üht olulist aspekti sotsiaalse kontrolli, sotsiaalselt tingitud tegevuse, majandussuhete ja kultuuri kaudu toimivast sotsiaalsest determinatsioonist ning on rakendatav paljude mikro- ja makrosotsiaalsete nähtuste (ka näiteks inimühiskonna tekkimise) seletamisel.

4. Määramatuse vähenemist keskkonnas saab vaadelda informatsioonina indiviidide jaoks, keskkonda ennast aga interpreteerida teate ja keelena, mis seda informatsiooni kannavad.

uuringud põhinevad ühisel metodoloogilisel kontseptsioonil, mis võimaldab käsitleda elulaadi tegevuste süsteemina koduses ja koduvälises keskkonnas.

13. Elulaadi kui terviku seostamine (loodusliku, tegevus- majandusliku, kultuurilise ja sotsiaalse) elukeskkonnaga näitab, et kumbki neist ei ole otseselt teineteise seisundi põhjustajaks, nad mõlemad sõltuvad laiema metakeskkonna seisundist.

14. Nimetatud uuringud ja teiste autorite tööd võimaldavad näidata, et
a) praegused industriaalselt toodetud linnaelamud on liiga kõrged ja suured, ning põhjendada sotsiaalpsühholoogilisi vajadusi elamute kõrguse ja naabruskonna suuruse osas;
b) elamute juurde kuuluv territoorium vajab markeerimist ja sisustamist ning elamurajoonide nn. vabaplaneering asendamist kvartalitena projekteerimisega;
c) linna senine funktsionaalne tsoneerimine võiks asenduda sotsiaalselt hierarhilise polüfunktsionaalse keskkondliku organiseerumisega.

15. Need põhimõtted võimaldasid välja töötada ühe elukeskkonna humanistliku ülesehituse mudeli,mis on joonisena käesolevas töös esitatud (vt. II peatükk, 2.osa).

16. Korteriga seotud vajaduste ja korteriga rahulolu seostamine perekonna elulaadis toimunud muutustega näitab,et sobivaks peetakse korterit, mille tubade arv võrdub pere liikmete arvuga või on sellest ühe võrra väiksem. Suhteliselt väike soovitav tubade arv on seletatav koduste olmetegevuste hääbumisega linnakorteris, mis põhjustab
a) vajaduste vähenemist töö ning praktilise tegevusega seotud ruumide järele;
b) eraldumistungi (püüdu eralduda oma tuppa), mis on seotud sotsiaalse määramatuse kasvuga ühise tegevuse ja tööjaotuse vähenemise tõttu.

17. Kodu kui inimliku elukeskkonna ja perekonna kui keskkondliku sotsiaalse subjekti taastootmine eeldab koduste olmetegevuste osatähtsuse ja kultuurilise diferentseerumise suurenemist koos korteri teisenemisega ühiselt kasutatavate ruumide suurenemise suunas.

18. Linna humanistlik sotsiaalne areng eeldab:
a) naabruskonna ja mitmesuguste kogu elurajooni (kvartali) peresid kaasavate ühingute ning seltside kui kodulähedase keskkonna kujundamise subjektide tekkimist;

b) elanike ühenduste, korteri- ja majaomanike,kaupluste ja ettevõtete, haridus- ja kultuuriasutuste, linnaosade volikogude jt. subjektide võrdväärset lülitumist linna sotsiaalsesse keskkonda, nende kaasamist linna elukeskkonda kujundavate otsuste tegemisse.
Linnavolikogus peaksid olema esindatud eeskätt linna keskkondlikud subjektid (huvi- ja võimugrupid), mitte aga ülemaalised poliitilised parteid.

ORIGINAL PUBLICATIONS AND ABSTRACTS

I FAMILY AND APARTMENT IN A NEW LIVING DISTRICT. J. KRUUSVALL, M. HEIDMETS. MAN. ENVIRONMENT. SPACE. Ed. by P. Tulviste. Tartu: Tartu State University, 1979, pp.43-81 (in Russian). Abstract.

FAMILY AND APARTMENT IN A NEW LIVING DISTRICT

J. Kruusvall, M. Heidmets

ABSTRACT

1. Method

1.1. The aim. Working out and piloting a method for clarifying social demographic needs of families in relation to the architectural parameters of the flats in mass construction of standardized dwellings.

1.2. The principles of sampling. The survey was carried out in big dwellings of new housing estates in four cities - Moscow, Pskov, Tallinn and Tartu. The respondents were selected by directed sampling (variation of the parameters characterizing the size of flats (1-4 rooms) and the family composition (number, sex and age of children, existence of grandparents). Altogether 637 families in four cities were surveyed according to the obtained 19 combinations of these parameters.

1.3. Survey "Family and Home" encompasses 9 processes of activity (taking meals, hygienic procedures, sleeping, child rearing, handicraft and mending, wage labor, interaction, active and passive culture consumption) which are divided into separate activities. Performing of each activity is obseved both at home and outside home, in real and preferred environmental conditions. Outside home the real and preferred localization of an activity (using service facilities) and its frequency was recorded. By activities performed at home, their localization in actual flat and their preferred localization in an ideal flat were recorded. Social organization of activities at home was measured by their real or preferred performance "together" or "separately" by family members and by the level of disturbance caused by other activities performed by other family members. Actual relations between family members and preferred family composition were regarded as social psychological factors which influence real and preferred character of space utilization - level of personalization, use of room by other family members, as well as general attitudes towards the flat - preferred number of rooms in the limits of given flat area, isolation from other rooms and needs for separate rooms for various activities. By the survey "Family and Flat" altogether 680 single parameters were measured, to which 70 new computer constructed indexes were added.

1.4. Data gathering and analysis. The survey was carried out from September 1975 to January 1976. Data analysis system is based on the step-by-step synthesis of single parameters of family's way of life into indexes and qualitative clustering of families where each step of the synthesis is accompanied by the analysis of correlations between the parameters. The data analysis scheme consists of 17 stages, each of which gives a practical and methodological outcome.

2. Proportion of at home and out of home activities.

2.1. Distance of service facilities from home. Survey data indicated that in Moscow and Pskov the service facilities are more available in the new housing estates, in Tallinn and Tartu - in central parts of the cities.

2.2. Number of the used service facilities and frequency of their using. It was found that the number of out of home service facilities used by a family was negatively correlated with the average frequency of their use ($r=0.21$). So in Moscow and Pskov "peripheral" service conditions families use relatively few number of services with greater frequency, and in Tartu and Tallinn "central" service conditions families use greater number of services less frequently.

2.3. Preferred localization of service facilities. According to our survey results, the preferences of families reflect the actual situation - where the needed service facilities are near the home, this situation is also preferred, when service facilities are located in the central city, their preferred distance from home is greater.

2.4. The factors influencing the use of out-of-home service facilities. The traditions of domestic activities are most remarkably revealed in Pskov where service facilities are used relatively seldom. Ethnic differences were revealed in the activities of taking meals and washing oneself - Russians perform these activities more often at home, Estonians - out of home. Influence of urbanisation is revealed in the activities of culture consumption and interaction - in big cities (Moscow, Tallinn) these activities are more often performed out of home than in smaller cities. Families with small children have less out of home culture activities and interaction, families with grandparents perform functional activities more at home, culture activities more out of home. With the improvement of flat conditions the number of used out-of-home service facilities increases, whereas the average frequency of their use decreases.

3. Spatial organization of family's activities in the flat. The analysis of zones of activity which were depicted on the flat layout during the survey, showed that different generations sleep in separate rooms if possible, and they have meals usually in the kitchen (although kitchens in standardized dwellings are too small for that).

Second largest room is filled with children's activity- and recreational zones 1,7 times more and third largest room is filled with them 2 times more than the largest room ("living room") in all types of flats. Most urgent need for a separate room is connected with the zones of sleeping, mental work, learning and reception of guests.

4. Social organization of activities of a family. The following activities are most often performed by the whole family together: having meals on the days off, reception of guests and watching TV. Each family member separately is more often engaged in reading and mental work, hobbies and having meals on working days. More urbanized living environment leads to more "separate" activities at home, in a less urbanized environment (Pskov) families act more often together. This is confirmed by the answers on the preferred number of rooms - in Moscow and Tallinn relatively greater number of small rooms, in Pskov - one or two bigger rooms are more often preferred. In general, more than 2/3 of the respondents do not wish to live together with grandparents or with their adult children in the future (in Tallinn 80%).

5. Factors influencing domestic activities and recommendations to the planners. Most problems in urban flats are related to the organization of rest and sleeping (both lack of space and activities of other family members are disturbing), children's activities (conflicts with the parents) and reception of guests (lack of space).

Recommendations on the flat design were made concerning the enlargement of rooms, separating rooms from one another and adding space for storage. The experience obtained by this study became a starting point for preparing a new, improved survey "Family and Flat" (1978).

II ON THE VALIDITY OF THE SEMANTIC DIFFERENTIAL TECHNIQUE. J. KRUUSVALL. MAN, ENVIRONMENT, SPACE. Ed. by P.Tulviste. Tartu: Tartu State University,1979, pp.118-128 (in Russian). Abstract.

ON THE VALIDITY OF THE SEMANTIC DIFFERENTIAL TECHNIQUE

J. KRUUSVALL (pp. 116-128)

Bipolar scales of adjective pairs, developed by Osgood and his co-workers, and called semantic differential technique (SD) are widely used for studying the attitudes of people towards various complex objects (works of architecture and art, texts of literature, etc.). Using the antonyms as the components of the same scale, the problem of validity of the evaluation arises in the cases, when the object of evaluation is related to both of the opposite qualities. In these cases we use a new variable - the tension of meaning - which measures the rate of "neutralisation" of the opposite qualities when placing the meanings of an object on a bipolar scale. For measuring the tension, the meaning of the object has to be measured separately on the unipolar scales, before the summary meaning can be formed. If the meaning construed in this way differs from the rating on the bipolar scale, the shift of meaning can be observed, which may also be caused by the abovementioned tension. We have the experimental evidence about the existence of tension on some SD scales. That is, the distance between the objects in the semantic space ceases to be invariant and the semantic space transforms into semantic field, where in addition to the distance, the hidden tension as a potential for dislocating the object in this space has to be taken into account. The causative factors of such tension of meaning may be related to: (1) the object of evaluation (too capacious and with diverse qualities, which could be construed in a variety of ways), (2) the subject (the object is emotionally loaded, significant for the respondent; the assessment is dependent upon expectations of conformative public behavior), or (3) the scale used (the adjectives are not appropriate to the object; they are not antonyms or exclusive; some qualities of the object are connected with one adjective, some with the antonym - the scale is not additively bipolar, but multiplicatively unipolar). The given results hold not only for the SD scales, but for other bipolar rating scales (satisfaction - dissatisfaction, etc.) as well.

III THE DETERMINATION OF FAMILY'S WAY OF LIFE IN THE URBAN ENVIRONMENT. J. KRUUSVALL. MAN. ENVIRONMENT. INTERACTION. Ed. by H. Mikkin.Tallinn: Tallinn Pedagogical Institute, 1980, pp.50-89 (in Russian). Abstract.

THE DETERMINATION OF FAMILY'S WAY OF LIFE IN THE URBAN ENVIRONMENT

J. Kruusvall

ABSTRACT

The way of life of a person (or group or society) develops in the environment in which he (it) acts, and reflects the properties of this environment. When a person in his activities is not able to overcome the contradictions that arise in the environment, his way of life also becomes contradictory, loses its adaptability to the changes in environment and brings about the decrease in the productivity of activities.

Every activity always takes place in the natural, activity, social and cultural environment, in relation to which the person appears respectively as a living being, subject, personality and individual (see Fig. 1). The dispositional connection between the environments shows that when certain conditions are present in the preceding environment, the emergence and existence of the next one is possible. But the processes in the preceding environment do not cause the emergence and development of the next environment, it develops on the basis of the preceding one and reflects its features. The determinative connection between the environments is present, when the essential changes in the preceding environment inevitably bring about some definite changes in the other one.

The chain of dispositional connections begins with natural environment, the starting point for determination is activity environment. As all environments are somewhat conservative toward the determinative influence, there is some contradiction between every environment and the preceding determinative one. There is maximum contradiction immediately before the determinative influence and minimum immediately after it.

Applying this model of environment in analyzing the way of life of some small group, in addition to the contradictions in the immediate environment (1,2,3 and 4 in Fig. 2)

the contradictions in the meta-environment (I, II, III and IV) and the contradictions between the immediate environment and meta-environment (А, Б, В and Г) must be taken into account. The latter one is discussed from three aspects: (1) the position of the immediate environment in the structure of meta-environment, (2) the uniqueness or ordinariness of the structure of the immediate environment as compared with forms common in the meta-environment, and (3) the difference between the status of a group member in the structure of environment of a particular group and in the environments of other groups in which he acts.

Analyzing then family's way of life in the urben environment, we are able to show (using the results of a sociological survey) that the contradictions of first and second kind between the home environment and meta-environment are lacking (or are not substantial for the activities of the family). The environment of big apartment buildings is of little value from the standpoint of family activities as well as for the wider natural environment. The surroundings of these buildings are characterized by great uniformity - the environmental conditions are similar in all new districts of the town. As the natural basis for the development of home is missing the domestic culture is also vanishing. The apartment as well as its furniture and equipment are products of mass production, this is probably also the reason for the standardization of domestic activities. The cultural communication between homes is becoming minimal (the link for transmitting domestic activity-culture through mass media is missing, the homes themselves incapsulate and fall apart from each other in the conditions of inner cultural uncertainty). As the result, experiences about the domestic activities are not spreading, and the wider cultural environment concerned with domestic activities (domestic cultural complex) does not emerge. At the same time, the social composition of the family rests on the customs of the past, and families are influenced by similar social processes (nuclearization, the upspurge in the statuses of woman and children, the weakening social control, etc.). Though the society supports the institution of family, the family as a so-

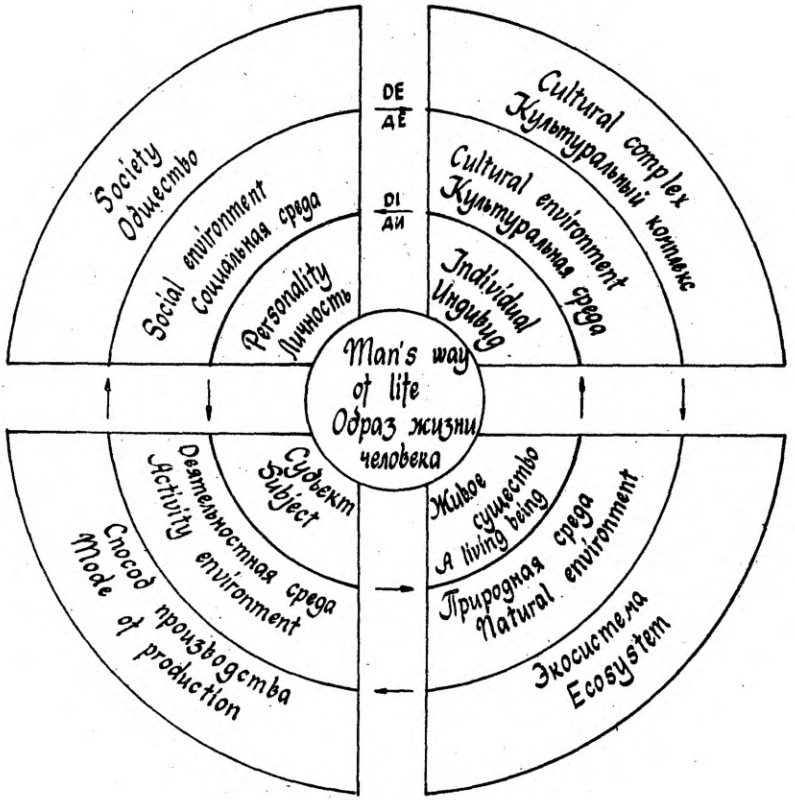


РИС. 1 ДИСПОЗИТИВНЫЕ И ДЕТЕРМИНАТИВНЫЕ СВЯЗИ МЕЖДУ СРЕДАМИ

FIG. 1 DISPOSITIONAL AND DETERMINATIVE RELATIONS BETWEEN ENVIRONMENTS

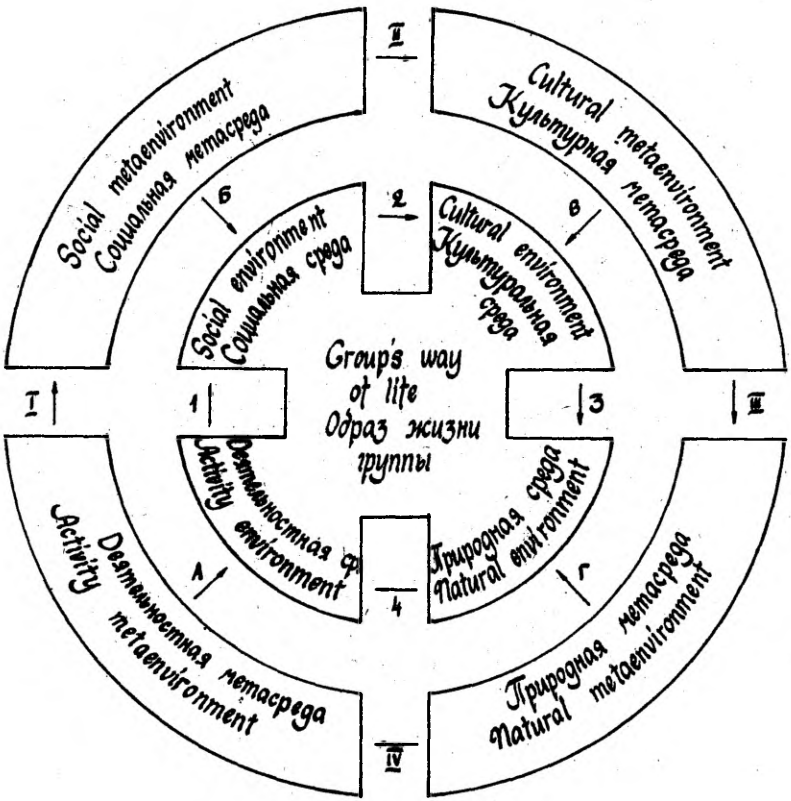


РИС. 2 ДЕТЕРМИНАТИВНОЕ РАЗРЕШЕНИЕ ПРОТИВОРЕЧИИ НА РАЗНЫХ УРОВНЯХ СРЕДЫ

FIG. 2 DETERMINATIVE SOLUTIONS OF CONTRADICTIONS AT THE DIFFERENT LEVELS OF ENVIRONMENT

cial institution is organizationally under-represented in the society, and the relations between family and society proceed through the individual family members. The family's social position in the society is rather low - it gets little material as well as moral support (the moral as well as material position of the family is attained through the activities of its members in out-home groups). But as the results of the survey show, the low social position of the family, or the constraintedness of the domestic activity environment cannot be considered as the prime causes of the decrease in productivity of domestic activities. So, for exemple, the number of children desired (as one indicator of family productiveness) is not higher in materially and socially well-established families (the wish to have one more child is not correlated with the number of rooms in the apartment, possession of a car or summer cottage, or family income size, etc.).

In such situation the third tenet of connections with meta-environment - the participation of family members in activity groups outside the home under rather different circumstances - gains crucial importance in the development of family's way of life. The low level of development of home environment may bring with it (1) frequent "escape" of family members to the places where the natural and material basis of activities is more favourable (recreation areas, local interest groups, workplaces, etc.), (2) the penetration of non-domestic elements of culture into domestic activities, (3) the penetration of the social structure of non-domestic groups into the family not taking into account the social processes present in the family (for example, the desire of man to transfer his leading position in the society into the family), and (4) the concentration of things and people inappropriate for domestic activities into the home (the non-domestic groups like school etc. do not give any kind of experience for family life, the role of the parents homes in such an experience is also diminishing). The penetration of non-specific features of meta-environment into home environ-

ment (which is by it self an entropical phenomenon) brings with it the reflection of the contradictions of meta-environment in the way of life at home, making it also contradictory. The dominant contradiction is between the domestic activity-environment and the social structure of the family.

Let us sum up: the decrease in the productivity of domestic activities (especially evident in urban environments) does not result from the determinative influence of the meta-environment in some part of the environment (for example, from unequal economic conditions of the families; from the low social appreciation of families with many children in the society; from fixed cultural norms toward the number of children in the family, the homeostatic reaction of human population to the decrease in mortality, or crowding in urban environment), but from the development of such way of life at home, due to which family is not able to act creatively.

IV ENGAGEMENT AND ORGANIZATION. J. KRUUSVALL. MAN IN SOCIOPHYSICAL ENVIRONMENT. Ed. by H. Liimets, T. Niit & M. Heidmets. Tallinn: Estonian Branch of Soviet Psychological Society & Tallinn Pedagogical Institute, 1983, pp.69-98 (in Russian). Abstract.

ENGAGEMENT AND ORGANIZATION

J. Kruusvall

ABSTRACT

The article deals with one aspect of social environment and its influence on man - the additional engagement of organized people. Historically, this can be observed in megalithic structures such as the Stonehenge, the Egiptian and ancient American pyramids, big fortresses, etc. The reason for creating such gigantic buildings was neither religious nor cultural, but social. It was necessary to find additional common engagement (work) for people that would justify the existence of complex social structure of ancient super-states as an organizer of such activity. People accept social organization because it determines the relations between them more clearly, giving everyone a certain role. Organization, though, can rely only on the division of labour, precondition of which is the existence of such labour. Due to permanent development of means of production, satisfying the everyday needs of people does not provide everybody with sufficient activity for the existence of social organization. Therefore, new "social" and individual needs develop in society that provide additional engagement for people. It can be supposed that the formation of mankind was connected with the appearance of some new factors (neither biological, nor yet social) that made the relations between people more undetermined and to overcome that situation the primitive division of labour between man's ancestors was fixed as a social organization. Such destabilising factors could have been the phenomena of interdiction and intersuggestion in personal relationships described by Porshnev (1974).

In the historical development of mankind such additional engagement appears in many different forms, depending on the level of development of productive forces, national, cultural, etc. peculiarities.

Nevertheless, it is possible to distinguish between the main ways of engaging people additionally that characterise

many societies and cultures during different historic periods:

1) interdiction and suggestion (pre-historical forms);

2) socio-cultural hindering of the development of productive forces (f.e., the lack of social need for the products);

3) engaging people with irrational social activities (i.e. religious ceremonies, building of pyramids and the like, military service, etc.);

4) the direct restriction of freedom of activity (keeping people in prisons, concentration camps and the like, unemployment, famine, etc.);

5) destroying products partly or completely (sacrificing, prohibitions and taboos, concious religious renuncication, destruction in wars, careless and purposeless usage, production of goods with low quality, etc.);

6) exploiting of man by another man (additional engagement for producing surplus production);

7) transformation of labour into the thing, accumulation of labour in the formof capital;

8) generating a need for additional consumption of the products of industry;

9) urbanization, increase of communicational engagement in society.

The city can be considered as a spatial embodiment which defines and engages people additionally. People are allured into the cities with better work and entertainment conditions, even in the conditions of economic stagnation the cities grow. The spatial crowdedness in cities calls forth the additional need for external organization of behavior among the citizens, the continuous state of stress enhances the probability that people will behave in stereotypic ways. The coordination of activities becomes monopolized, the population gets more and more nuclearized as the primary activity groups dissapear. In the absence of humanistic criteria, the society strives toward more and more defined and easily manageble (programmable) systems, in which the individual's possibilities to act as a subject and personality diminish ever more.

V ENGAGEMENT AND ORGANIZATION II.

J. KRUUSVALL. PSYCHOLOGICAL CONDITIONS FOR SOCIAL INTERACTION. Ed. by E.-M. Vernik. Tallinn: Tallinn Pedagogical Institute, 1983, pp.17-46 (in Russian). Abstract.

ENGAGEMENT AND ORGANIZATION II

J. Kruusvall

ABSTRACT

The present article deals with additional engagement of self-organized people as a type of influence exerted by the social environment on human activity. In the first part of the article which was published separately, the possible emergence of this phenomenon in history and the following historical forms of its manifestation were described. The second part includes different interpretations of the phenomenon of engagement.

PHYSICAL analogue of the phenomenon is the self-emergence of organized structures (crystals, molecules) according to the principle of minimizing potential energy. Atoms which are "engaged" with structural interaction cannot move in other directions any more and the enthropy and potential energy of the system decrease. The theory of dissipative structures by I.Prigogine is applicable also on the higher levels of negenthropic pyramid. The structure of a community is based on additional behavioral engagement of individuals which in its turn increases the consumption of resources from the wider environment. Transmission capacity of sensoric and effectoric information channels of the living beings is limited, therefore they can exist only in an environment with limited indefiniteness. The main function of living activity is reducing the indefiniteness of vital parameters of environment on different levels of biological and social regulation. The indefiniteness of the environment which is formed by other individuals, is greater in the case of their potential state (e.g. a beast lurking its prey) and smaller in the case of active behavior (because only one mode of activity can be realized at a time). In the situation where an individual can influence the behavior of another, he tries to evoke rather an active than a passive behavior, engage the other with some kind of activity.

The INFORMATION obtained from the environment as the result of this, is not contained in the content of a particular engagement activity but in the exclusion of other possible directions of action. So N.Wiener's sentence: "the amount of information in a system is the measure of its level of organization" obtains also a social and environmental meaning.

Natural means for optimal transmission of messages in COMMUNICATION SYSTEMS is the redundancy of language and

speech. But the reason for multiplying a message in a text may not be only environmental noise but also scarcity of messages which are necessary for filling the text. As language develops on the basis of meanings emanating from activity and behavior, then we can conclude that the redundancy of language in its turn is the reflection of the "redundancy" of activity, i.e. additional engagement, and the latter has also the function of reducing social "noise". If according to A.Moles the redundancy of language is the measure of the form (gestalt) which increases the understandability of the message, then analogously additional engagement is the measure of the social structure which makes activity "understandable", definite.

Beside real engagement activity also PSYCHIC engagement deserves attention which emerges from the attractivity of the behavior of other individuals for the observer, from unconscious imitation of the once observed behavior or activity models in the future, from cognitive, emotional or social restrictedness in interactions with the environment which is caused by one-sided education or upbringing, etc. As in the case of additional engagement the definite activity itself, and not its result (product) has direct social value, then often it is manifested in the form of cyclic repeating of some activity or behavior - multiplying standard production or ritual behavior. As the result of engagement activity not only the indefiniteness of environment decreases but often also the uniformity of environment increases. But a self-organizing system needs a certain minimal level of variety for its existence (W.R.Ashby). Thus a community which generates additional engagement and destabilizes itself through that, destroys the bases of its own CONTROL. Choice of inadequate routes of development is more probable in big systems where there is always less socially usable information than in small associations (N.Wiener). Most social associations are ruled (democratically or not) in the name of the people. At the same time the value of the manifestations of the people's will (opinion polls, referendums, elections) as a means of self-cognition of the socium is rather low. People who do not possess their own means of activity, who do not have adequate information on what is happening in the environment and whose way of life is socioculturally equalized, cannot even collectively make decisions on the directions of development of the society, their choices can be easily manipulated. In actual leadership these persons or social forces whose projects enable to engage (socially define) directly or indirectly more people, will get the power. The spectrum of social influence is wider than the spectrum of economic influence - the social function of capital is first of all the creation of jobs and production of living environment which generates additional engagement.

In his original theory L. Gumilyov treats ethnogenesis as a process which proceeds in the context of alternating social events (states). But when we succeed in describing the social life of an ethnos using the parameters which are invariant in relation to concrete social quality (formation), like the degree of additional engagement, then we can observe in parallel to ethnogenesis also the SOCIOGENESIS of the given nation. There are nations whose social organization is characterized by high level of additional engagement, and there are nations whose social life is more based on natural engagement. It is caused both by natural conditions and by the psychic mode of the nation.

ENGAGING SPACE. Social systems which are based on additional engagement form also such physical living environment which has engagemental character. M.Savchenko (see VIII, p.1319) differentiates 6 types of architectural "space-times", each of which has its own main attribute and main function: space of goods - plurality (as an attribute) - permeability (as a function); positive space - discretion - measurability of environment; figurative space - simultaneity - differentiability of environment; ritual space - successivity - orientation towards environment; organic space - continuity - familiarity of environment; universal space - unity - orientation in the environment. Under- or overfunctioning of these space-times, i.e. "inertness" or "super-conductivity" are both generators of additional engagement.

Natural development of each city proceeds in parallel both in the utilitarian and ritual spaces, where ritual environmental rhythms are characterized by their stability, utilitarian ones are characterized by their variability. On a certain stage of development former utilitarian edifices are declared ritual afterwards and an old city becomes a canonized environment where nothing can be changed. A reflection of such attitude is also the construction of new housing estates according to complete projects, fighting against unorganized construction. As the result, opposite effect appears - both old city and new dwelling districts lose their ritual meaning for people, city planning becomes a ritual game of a narrow circle of architects. Additional engagement is one of the mechanisms by the help of which people's dependence on the social environment passes over to the dependence on natural, culture and activity (incl. spatial) environment.

VI THE INFORMATIONAL FUNCTION OF SOCIAL INTERACTION. J. KRUUSVALL. PEOPLE. SOCIAL INTERACTION AND THE LIVING ENVIRONMENT. Ed. by J. Orn & T. Niit. Tallinn: Tallinn Pedagogical Institute, 1986, pp.85-103 (in Russian). Abstract.

THE INFORMATIONAL FUNCTION OF SOCIAL INTERACTION

J. Kruusvall

ABSTRACT

1. Entropy of the social self-organization.

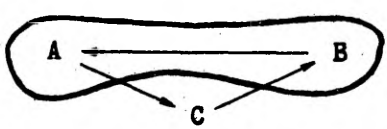
From the cybernetic standpoint, the society is usually depicted as a self-organizing system, the orderedness of which constantly increases. At the same time, the entropy of the surrounding (natural) environment increases considerably. Some kind of subjects who self-organize themselves at the expense of the social environment (i.e., the other subjects) can be treated as a similar system. The process of self-organization proceeds from the subject who has the greatest undeterminedness (inner potential of action) in the social environment. Other subjects, trying to reduce its undeterminedness, connect themselves with it, determining themselves toward it to a certain extent. It means that the undeterminedness (self-information) of the contacting subjects decreases and the entropy in the social environment as a whole increases. The result of some local process of self-organization is thus the increase in the dependence of engaged subjects from each other, which finds its expression in the increase of their (informational) similarity and redundancy of activity. The formula (1) can be interpreted as the index of redundancy of

$$R = I - \frac{H}{H_{max}} , \qquad (I)$$

the system's organization, or as the redundancy of a "language" developing on the basis of a social "alphabet" (consisting of the subjects). Besides, it is not essential which particular messages are transmitted using this "language", the process of spontaneous social self-organizing may develop on the basis of whatever activity (behavior) of the subjects (and may be even harmful for themselves). The self-organization of the society should be under the control of subjects, who themselves are not engaged in the spontaneous self-regulation; for whom the management of other subjects is not only the means for self-organizing, but conscious and purposeful activity for the welfare of the people.

2. Bipolar stability.

An example of spontaneous self-organizing process is discussed, in which the system consists of two antagonistic subsystems. One of them (A) generates undeterminedness into the social environment (C), the other (B) is an organization created by the society for eliminating (determining) A (cf. Figure on page 91). As the existence of A is an inevitable precondition for the existence of B, a mechanism should exist in their relationships, which enables for B to reproduce A. The self-organization takes place on the charge of the wider social environment C, the entropy of which increases, i.e., the environmental subjects have to determine themselves toward the system AB. Therefore the subjects of a higher level can use such bipolar systems as the means for organizing the society. Particularly, such spontaneously self-organizing systems like criminals/legislators, students/teachers, sick persons/doctors, rural inhabitants/townspeople, etc. are discussed. The first ones form the subsystem generating undeterminedness in the society, the latter ones - the subsystem trying to reduce this undeterminedness which is maintained on the expense of the society. The reproduction of the former by the latter takes place in specific institutions like prisons (reproduces the role of "criminal"), school (reproduces the role of stu-



dent), hospital (reproduces the role of sick person), and isolated from and opposed to the city "village" (reproduces the role of rural inhabitants).

3. Informational processes in the social systems.

The informational processes in which the individuals transmit more information than they receive are defined here as positive, the process in which more information is received than transmitted, is defined as negative, and the one in which informational bonds between the individuals do not change, is defined as neutral. In the latter case much information can be transmitted, as in the case of mass transmission of a news item. The states of the social environment may be classified into three catego-

Социальная жизнь / Информ. процесс		Формирующие-ся Forming	Фиксирующие-ся Stabilizing	Распадающие-ся Deteriorating
Позитивный	Positive	+	–	0
Негативный	Negative	0	+	–
Нейтральный	Neutral	–	0	+

ries as well: forming, stabilizing, and deteriorating structures. If we take into account the evaluations given to the informational processes in the various states of the social environment as approving (+), denying (–) and unconcerned (o), we get the table on page 97. The transition from one state of social environment to another is in such case performed by operator A (cf. pp. 98-99), which might be called a <u>natural</u> social operator. Introducing an <u>artificial</u> operator B, the life of the society could be transformed into the "ideal" state $(\frac{+}{o})$, where positive informational processes receive approving, negative - denying, and neutral - nonconcerned evaluations (cf. p.99). In such state, there is maximum of information (minimum entropy) in the social environment together with minimum undeterminedness (high level of organizedness).

$$A\left(\underline{\overset{+}{o}}\right) = \left(\overset{-}{\underline{o}}\right), \quad A\left(\overset{-}{o}\right) = \left(\overset{o}{+}\right), \quad A\left(\overset{o}{+}\right) = \left(\underline{\overset{+}{o}}\right)$$

$$B\left(\underline{\overset{+}{o}}\right) = \left(\overset{+}{o}\right), \quad B\left(\overset{+}{o}\right) = \left(\underline{\overset{+}{o}}\right)$$

VII TOWARDS INCREASING SOCIAL EFFICIENCY OF LIVING ENVIRONMENT. J. KRUUSVALL, M. HEIDMETS. URBAN REPRODUCTION PROCESSES. Ed. by M. Pavelson & K. Katus. Tallinn: "Valgus", 1986, pp.132-150 (in Russian). Abstract.

TOWARDS INCREASING SOCIAL EFFICIENCY OF LIVING ENVIRONMENT

J. Kruusvall, M. Heidmets

ABSTRACT

By the 80-ies in the cities of the USSR dwellings with most durable constructions, most high (65% of urban flats were in houses with 5 or more floors) and with most small flats (75% of the total amount of flats had 1 or 2 rooms) in Europe had been constructed. At the same time surveys and opinions expressed in the press indicated to the unsuitability of such environment for normal life. If people had free choice, 2/3 of families would relocate from the districts of mass standardized dwelling construction into other city quarters. Not only physical paramaters of the environment should be blamed for the emergence of such situation, problems lie first of all in these social relations which determine the formation and functioning of living environment. City residents have remained entirely aside of the process of environment formation, dwelling construction industry which is alienated from the real life, dictates everything.

Social model of the formation of living environment, which is presented here, is based on the survey carried out by the environmental psychology research group at Tallinn Pedagogical Institute and All-Union Central Research and Design Institute of Dwellings in new housing estates of several cities of the USSR in 1978-1985, and on environmental psychological literature. General principles of dwelling construction should be the following:

1) living environment should be diverse, enabling to take into consideration the needs of different families,different demographic, professional, ethnic, cultural a.o. groups of residents;
2) participation of future residents is necessary at all the stages of environment formation;
3) a neighborhood should have the right to form local self-government which would administer objects of living environment and would control their functioning;
4) for that it is necessary to start general cooperative dwelling construction and stop free distribution of state flats;
5) widen the rights of dwelling cooperatives in choosing their members and in forming their environment;
6) simplify the system of flat exchange and hiring;

7) transform the construction industry so that universal building components for varied dwellings would be produced and a residents' cooperative as the future owner would give orders for the construction works;

8) construction projects of the city, both concerning dwelling construction and construction of public buildings, should be made public and their suitability should be discussed in public.

Formation of living environment should depart from the following principles which are based on human needs revealed in different studies: 1) dwellings should be no higher than 4 floors. In the conditions of unrestricted choice more than 60% of families prefer living on the 2nd to 4th floor. For those who prefer living on higher floors (families with urbanized way of life in big cities, singles, families without children, etc.) there are enough high rise buildings already constructed. In high rise estates there is more crime (O.Newman), higher floors' residents have weaker contacts with the ground (coutyard), on higher floors the microclimate of flats deteriorates and the frequency of illnesses increases, balconies cannot compensate the insufficiency of time spent outdoors.

2) Number of flats in a dwelling (or in neighboring dwellings should be considerably reduced. Both our surveys and studies in the West (R.Bechtel) indicate that there should be no more than 60 flats in a neighborhood.

Several studies have revealed low level of acquaintance and interaction between the residents of big dwellings (D.V.Nikolayenko). One of the causes of the alienation from environment is the great number of spatially close but mutually strange people. Social organization of a neighborhood could enlarge the circle of acquaintances to some extent but even a community cannot function in the conditions of too large neighborhood.

3) The territory surrounding the dwelling (common territory of several dwellings) should be differentiated from the surrounding environment - it would promote the emergence of social control and the use of this territory as an activity place. On open territories considerably less interaction among the residents and functional activities are performed. At the same time there is not enough room for many activities in the flats. More closed surroundings are more frequently regarded as their own courtyard by the residents. Protected space should be marked, observable from the house, making the impression of active activity and labelled (O.Newman).

4) In the common courtyard of a neighborhood there should be spatial possibilities for different activities and interaction. Own place is most of all necessary for younger pupils, and they should have the possibility

of forming their place themselves, using materials at hand. Semi-closed places where one can observe the surroundings, being himself concealed, are suitable for interaction. In a bigger courtyard also polyfunctional centers (vending points, cafe, etc.) where all the residents could interact, are necessary.

5) Several common rooms should be in use of neighborhood families (heated and unheated cellar, sauna, rest room, workshop, children's room, gym room, etc.) which would compensate the lack of space in flats.

6) Flats should be exchangeable within the limits of the neighborhood. Studies reveal that the majority of families do not wish to live together with the grandparents and the adult children, but they agree to live in the same neighborhood with them. It is dangerous to settle new housing estates with people of the same age (e.g. young families) because demographic processes caused by life cycles lead to wave-like changes in the composition of the residents.

7) By projecting dwelling quarters one should renounce from the principle of free planning, change functional zoning into social zoning. Traditional network of streets and courtyards should be restored. Functionally differentiated districts (industrial district, dwelling district, trade center, etc.) which demand excessive locomotion from the people , should be replaced by the conception of a city quarter as a separate small town. Living environment would be then differentiated on the social principle: the territory of a family, a neighborhood, a quarter, a settlement in each of which there are service, culture, etc. facilities and unpolluting industrial enterprises of the respective level.

Living environment should be formed according to the principle of social self-regulation which would increase people's identification with this environment and the protectedness of it, decrease destructive behavior and learned helplessness in solving one's problems, promote the formation of stable contingent of residents with varied way of life.

VIII ENVIRONMENTAL PSYCHOLOGY IN THE SOVIET UNION. T. NIIT, M. HEIDMETS & J. KRUUSVALL. HANDBOOK OF ENVIRONMENTAL PSYCHOLOGY. VOL.2. Ed. by D. Stokols & I. Altman. New York: Wiley, 1987, pp.1311-1335.

Chapter 37

ENVIRONMENTAL PSYCHOLOGY IN THE SOVIET UNION

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37.2. THEORETICAL APPROACHES

37.2.1. Introduction

Both Marxist epistemology as well as the experience of practical research show that the study of human behavior without taking the qualities of the environment where a person lives into account does not give authentic results. Therefore, as a rule, most disciplines dealing with human beings (including psychology) advance sooner or later to the environmental viewpoint, trying to approach the human being in his or her "wholeness." Human beings are surrounded by an outer world that exists independently from them and forms their environment. Humans' behavior can be influenced by environmental processes that take place in the near as well as distant surroundings (a person may not even be aware of these processes). A person's perception of the environment and his or her subjective attitude toward it have also developed in interaction with the environment and are objective to their character.

Different researchers pay attention to different aspects of the human–environment relations. That accounts for differences in the way the environment is viewed as an object of investigation. The different interpretations of the environment were important themes of discussion at both Lohusalu conferences (see Niit, Heidmets, & Kruusvall, 1981, 1983a).

The following approaches can be distinguished: (1) Some authors take, as the basis, the ways of organizing the environment proceeding from the person (subject) (person-centered theories); and (2) another group of authors tries to model the structure of the environment and the influence of the environment on human beings (environmental theories).

Two person-centered approaches to environment can be distinguished. First, the environment is treated as a person's subjective, integral, and continuous perceptual image of one's surroundings, where separate objects are not distinguished. A person perceives his or her surroundings in accordance with his or her environmental state (that cannot be described objectively) in a way that is characteristic to that person alone and that often determines one's behavior in different places.

Second, the environment is divided into parts, according to their different entrances into the activity of the subject. A person controls different spheres of the environment to different degrees and identifies oneself with them (e.g., the degree of personalization). Different subjects have different structures of environmental control. The basis of these differences is human interaction, and this environment is influenced by a person's own actions as well as by wider social processes.

Three types of environmental approaches can be distinguished. First, the environment is multistructural, and therefore, it is only natural to divide it into parts and types, which proceed from different disci-

plines dealing with human beings and which have different research aims. Every such differentiated part of the environment (e.g., psychological, geographical, juridical) has its specific features. A person's activities in different parts of the environment and the interrelations between those parts cannot be compared. To achieve a complete picture of a person's relations with the environment as a whole, it is necessary to collect data from as many spheres as possible.

Second, the environment is an integral system, and the relations of its separate parts with a person (as an integral being) can be measured on the same scale. General laws exist that characterize the relations between humans and their environment. The influence of the environment as a whole on a human being depends on whether the qualities of different parts of the environment are in mutual accord or disaccord. The term *environment* can be used in theoretical approaches and in interpreting the research results, but it cannot be used in empirical studies because it has no operational content.

Third, there is a trend, proceeding from traditional environmental psychology and dealing with the influence of different sociophysical environments (e.g., behavior settings) on humans' actions.

These approaches are not mutually exclusive; rather, they are definitions of the environment that various groups of researchers rely on in their studies. Several such conceptions were presented in the proceedings of the Lohusalu conferences (cf. Niit, Heidmets, Kruusvall, 1981, pp. 13–74; Niit, Heidmets, & Kruusvall, 1983a, Vol. 1, pp. 14–173). Usually they are fragmented or situation- (environment-) specific; there are very few elaborated models.

Next we present several examples of theoretical approaches. The conceptualizations of Heidmets and Mihhailov are examples of the subject-centered approach. Kruusvall discusses the relations between different parts of the environment and their influence on the way of life of the subject (an example of the second type of approach mentioned previously). Savchenko's model represents a paradigmatic approach to architectural environment, and Niit tries to connect different levels of analysis and concepts in dealing with human–environment relations. Whereas the first models are explanatory, the last two are methodological schemes for research.

37.2.2. Approaches to the Environment Emanating from the Subject

Several researchers have conceptualized the environment emanating from the subject. In this case, the environment consists of the objects and phenomena of the outer world that are objectively connected with the subject's everyday activities (Heidmets, 1983a, p. 61; Kaganov, 1983, p. 49).

The most important features of this approach are the following:

1. The observation unit can only be the "subject–environment" system; none of the two poles can be fully treated independently (Heidmets, 1983b, p. 47).

2. It is not correct to observe the subject and the environment as being mutually influential but at the same time separate units. The environment is connected with the subject's functioning and is an inseparable part of every subject (Abzianidze & Dzhorbenadze, 1983, p. 57).

3. The development of the subject takes place through "occupying" the environment (Kaganov, 1983, p. 49). In the process of this development, the subject "builds" himself or herself into the outer world of objects, ideas, and people (Heidmets, 1983b, p. 65), whereas the structure and qualities of this world determine the future qualities of this subject (Mihhailov, 1983, p. 46).

Let us have a closer look at two theoretical conceptions, emanating from the previously mentioned viewpoints. Heidmets, (1980, 1983b) in his model of "environmental subject," proceeds from the historical development of society and the changes in relations between the subject and the environment that have taken place in the course of their development. Following the individual's historical development into an autonomous subject, we can point out three kinds of changes in his or her relations with the outer world: (1) development of *control* over a certain part of the environment by the person; (2) *separating* the controlled part of the environment *socially*, that is, limiting the influence of other subjects in this environment; and (3) *identification* with the controlled/separated environment, the feeling its being of one's "own."

Hence, humans' formation as subjects occurs with the help of the environment; in the course of this process a part of the environment becomes one's "own" for a person objectively because he or she controls and separates it—as well as subjectively—he or she perceives it as valuable and essential, as a part of oneself. Historically, the first objects through which humans realized their subjectiveness were evidently their own bodies and activities. This controlled sphere extended to the nearest environment (home, domestic objects), and later on it developed still further.

The development of human dwellings serves as a good example of how every historically "new" subject needs his or her own environment (his or her own object of control). That is why the primary commune dwelling has, in the course of historical development, become differentiated into the numerous dwellings of nuclear families (for more detailed information, see Heidmets, 1983b, pp. 48–51).

Therefore, every subject is inevitably an "environmental phenomenon" (in addition to an individual, a group, or an organization can also be subjects), but it is necessary for their existence as subjects to incorporate into themselves a certain number of objects from the outer world through which they can realize their subjectiveness. These objects may be either physical (things, places), intellectual (thoughts, ideas), or social (people, other subjects) in their character. Proceeding from the previously mentioned division of objects into three classes, we can depict "the environmental subject" schematically as shown in Figure 37.1.

In Figure 37.1 the disrupted boundary marks the identification border between the subject and the world—inside the boundary are objects perceived as one's "own"; outside is the "strange" world.

Such an "extension" of the subject into the environment seems to be one of the driving needs in social life. At the same time, "the incorporated environments" are the main arena where relations between subjects and changes in these relations are determined.

What could such an approach to a subject give to environmental psychology? Theoretically, it enables one to observe the components of the environment functioning in an integral system that is determined by the activities of a social subject and his or her social relations. Therefore, we have not got two different realities (an environment that influences human beings and a human being who changes the environment) but an integral system where we can speak about transaction not between subject and environment but between different subjects. Practically, proceeding from the subject gives a basis for understanding the spatial structure of existing human-made environments and their tendencies toward change [cf. Heidmets, 1983b, pp. 51–65]).

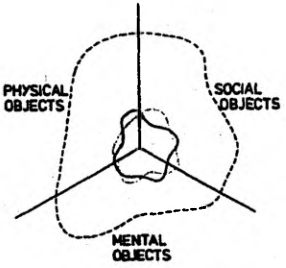


Figure 37.1. A model of an "environmental subject", ——— boundary of separation, ... boundary of control, ---------- boundary of identification.

The main idea of Mihhailov (1983) is also the merging of the subject and the environment. He observes this process against the background of humans' relations with the city environment. The basic quality of a city environment, according to him, is marginality. It finds expression in the antagonism between *street* and *yard*, the first of which represents the open, communicative pole of city, the other, the closed pole that helps the subject to develop. In the present-day city, the street has begun to dominate over the yard. The street as a borderline determines the marginality of the city environment. The marginal state of the environment also conditions the marginal subject: In the case of the city, it is expressed in "the state of intertwinement of the subject and environment, which has the structure of street/yard" (Mihhailov, 1983, p. 48). Here is a field for environmental researchers and architects—to take counteraction against the marginalization of subjects by creating a "nonmarginal" environment.

37.2.3. Environment as an Integrated Whole

According to Kruusvall's (1980) model, the environment that surrounds humans consists of four self-regulating parts (natural, activity, social, and cultural environments), the interrelations of which find realization at three different levels (humans, immediate environment, metaenvironment).

As a *living being*, humans belong to the *natural environment* where interactions between different species and populations are regulated by narrower and wider ecosystems and life activities are influenced by topography, soil, climate, water conditions, and the like. People who act together, the instruments they use for their activities, and their interrelations in the course of these actions (the division of labor, instruments, and distribution of products) form the *activity environment* where humans are (depending on their freedom of activity) *subjects* of activity. Regulation in an activity environment takes place according to laws of economy; the metaenvironment is determined by the prevailing social mode of production. The *social environment* determines humans'

stable group relations, gives to each member of a group social status and roles and regulates interrelations between large social groups—classes. Society as a social metaenvironment is based on the organizational structure of the institutions of social control. A human being as a *personality* is opposed to the social environment. This personality develops through positions and roles acquired in the course of life into a permanent complex of interactional traits. The *cultural environment* fixes and passes on modes of action and behavior, systems of values, models of objects, social institutions, and the like that are accepted by a certain group of people (society). The structure of the cultural environment is formed by cultural complexes that may be connected with the activity environment (agro culture, car culture, trade culture, etc.), with a social group (class, family, etc.), or with a certain population group (nation, culture of a certain village, etc.). Humans as *individuals* follow cultural standards selectively, adding new features to them that proceed from their personal experience.

Dispositional interrelations between those different environments are important from the viewpoint of the integrity of the environment (see Figure 37.2). Thus the stability of the natural environment is a necessary precondition for the development of a cultural environment; the stability of a cultural environment is a precondition for the development of a social environment; the stability of a social environment is a precondition for the development of an activity environment, the stability of which is, in turn, important for the development of certain aspects of the natural environment. The developmental processes in some part of the environment inevitably cause changes in other parts of the environment (causal relations). The development of an activity environment causes a disruption in the stability of the social environment (which will be solved by the changes in the latter). The development of the social environment disrupts the stability of the cultural environment (which is solved by cultural change). This development, in turn, brings a disruption of the stability of the natural environment (which is solved by the transformation of natural environments). Such changes resulting from, for example, pollution or the depletion of resources cause instability of the activity environment (which is solved by changing the activity environment in accordance with the changed natural conditions).

Studying the influence of the intermediate environment on human beings, the processes forming this environment, that is, causal influence proceeding from the metaenvironment, must also be taken into account. In this case, *correspondence* (or *contradictions*) of those four environments is essential. Contradictions in the metaenvironment will be reflected, sooner or later, in people's behavior and will change their way of life accordingly. A contradictory way of life is characterized by low productivity (e.g., few children in the family, few activities at home, low productivity of labor, etc.) as well as "social cocooning" (e.g., individualism and closed groups).

Kruusvall emphasizes that an important quality of interrelations between a human and the environment is their *mediated* interaction (perception, overt action, etc.). The parts of humans (or an activity group) that process information (human brain, the leader of a group, computer's memory, etc.) are always isolated from the direct influences of the environment. Information arrives there and departs from there by (sensory, effectory, communicative, etc.) channels, the information-transmitting capacity of which is limited. Therefore, humans (like any other living beings) perceive the environment as undetermined to a certain extent. Their activity toward the environment always means the

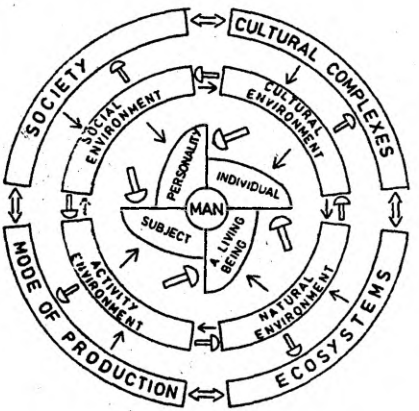


Figure 37.2. Dispositional and determinative (causal) relations between environments. ——→ denotes the causal direction for solving contradictions in the environment; and ⟹ denotes dispositional relations between environments. (Adapted from "The Determination of Family's Way of Life in an Urban Environment," by J. Kruusvall, 1980. In H. Mikkin (Ed.), *Man, Environment, Interaction*. Copyright 1980 by Tallinn Pedagogic Institute.)Adapted by permission.

transition of the environment to a more determined (stable) state.

In the natural environment, a living being can survive only by occupying a certain space (in phylogenesis it is characterized by more and more closed metabolism in one organism; control of nest and of a certain territory by outspacing other individuals and species, etc.); in an activity environment, a subject realizes oneself through means of action and space that are at one's disposal. In the social environment, the development of personality is connected with opportunities to control and direct other people's activities. In the cultural environment, every individual creates a subculture with its original features. Therefore, phenomena connected with the personalization of space belong to the sphere of the social environment because they do not outspace other people from a certain part of space entirely but control and determine their behavior in this space. Kruusvall (1983a, 1983c) has shown that control over behavior often means stimulating certain ways of behavior among other people. Therefore, the influence of the social environment can be treated as generating a complementary behavioral engagement, the task of which is to determine people's position with regard to each other.

The results of activity depend on the state of people as well as on the state of the environment. When we associate the "number" of changes that have taken place in the environment during a certain period of time with the "number" of people's reactions to those changes, we get the indicator of the *degree of man's dependence on the environment* (DDE) (Kruusvall, 1978, 1981a). At the given level of information processing, the composite DDE can be considered a constant. As means for operating in one part of the environment are often taken from another, different part of the environment, we can presume that DDE also travels from one part of the environment to another. A decrease of humans' dependence on the natural environment calls forth their greater dependence on the activity environment (on means of action, other people, etc.). A decrease of humans' dependence on the activity environment is often achieved at the cost of greater dependence on the social environment, and so on. This capacity of the social environment to generate a complementary behavioral engagement can be used as an example of the increase of DDE.

37.2.4. Methodological Approaches

Savchenko (1981, in press) argues that every study of spatiotemporal relations in architecture is based on some a priori paradigm of knowledge. He has identified six different paradigms, which are the different cognitive projections of the unitary spatiotemporal continuum. One of these paradigms is *inborn* knowledge. Architecture here is the embodiment of an architectural idea. The spatial language for this idea consists of architectural universals (above, below, vertical, center, etc.). The space of universals is topological, and time in such space is eternity. The invariant universals transmit the essence of architecture everlastingly through its metamorphoses.

The opposite to architecture as an idea is architecture as a thing. This is an *experiential* (empirical) paradigm—the world of particular spatial goals and resources. Such space has no metrics; it is governed by the paths of maximal spatial efficiency (usefulness). Time in such space is drifting, accelerating and decelerating as the gradient of spatial behavior. The drifting of time proceeds here through the succession of spatial objects, and several independent times can drift in such space simultaneously.

These two paradigms define the *existence* dimension of architectural space-time. On the dimension of *content*, we can oppose ritual and figurative space.

Ritual space is characteristic for the paradigm of symbolic knowledge. Architecture here appears as an institution, a phenomenon of culture. Space consists of locuses with symbolic meaning; its purpose is to maintain the existing order. Time in such space is cyclical, a ritual that usually has a complex organization from introduction to finale.

On the other hand is the *apprehensive* paradigm, the space of which is figurative space. This kind of space is filled with cubes, cylinders, cones, and the like, the interaction of which creates the spatial situation. The forms of meanings and the meanings of forms transform into each other, and the architectural synonyms come into being. When ritual space maintains the tradition, figurative space brings novelty into spatial culture. Time in this paradigm consists of insights, apprehensions of spatial truths, and is therefore a sequence of peaks of apprehension, between which nothing happens.

On the third dimension—*definability*—we can distinguish between the space organ and metric space. The space organ is characteristic for the paradigm of *intuitive* knowledge. Architecture here is an extension of a subject; architecture-as-environment is given only to the subject included in it. *Own* is opposed to *alien* in this paradigm, and the boundaries of "one's own space" are fluctuating constantly, depending on the activity of the subject. It is the tremor of architectural time—"eternal present," con-

stant activity, and sensitivity— that corresponds to such space.

The opposite to this paradigm is *positive* knowledge. Architecture stands out as object in this paradigm, and the space is homogenous and metrical, without a preferential point of reference. Every particular object is measurable, with discrete boundaries, that is, it is definable. Usually this definition is expressed in a number. Time in such space is a directed time arrow.

Thus we can deal with architectural environment from at least six different paradigmatic perspectives, and any architectural construction can be presented through the prism of any given paradigm. The subject is included in this model in a rather obscure and undefinable manner. In one case, he or she is an ideal observer (positive knowledge); in another, a creator designer (apprehensive knowledge).

Niit (in press) has tried to interpret the psychological content of this model and has compared it with the classification scheme of Stokols (1978). Kruusvall (1983c) analyzed the properties of environment that are engaging humans, using these paradigms as a starting point.

Niit (1983b, 1983c; Niit & Lehtsaar, 1984) has proposed a scheme for analyzing human–environment relations on the level of a social unit (group, family, community, etc.). In every sociophysical system, it is possible to differentiate for analytic purposes at least three realities--activity, relations, and various characteristics of place (cf. Figure 37.3). A system characterized by those three facets both takes into account and, in the course of its functioning, generates sociocultural norms. At the level of the social unit, these are interpreted as something given, and they probably influence activities and relations as well as places.

Activity is the reality where the influence of both place (size, number of people, etc.) and relations (role and status relations) finds its expression. At the level of the social unit, we are interested in the complex pattern of transactions between place, activities, and relations. But during the analysis, we may, and probably have to, differentiate the main directions and components of these transactions (see arrows on Figure 37.3): The parameters of place may support or constrain some activities; at the same time, the functioning social unit changes several parameters of this place in the course of its activities. The relations between the participants create the conditions for some kind of activity or set limits for it, but these relations also change during this activity. It is hard to find direct influences between places and relations (if we try to avoid falling into architectural determinism); probably activities function here as mediating links. Thus place and relations are the relatively stable components of the system, whereas activity is the dynamic one. Nevertheless, this activity in a particular place is characterized by considerable regularity and stability, which at the

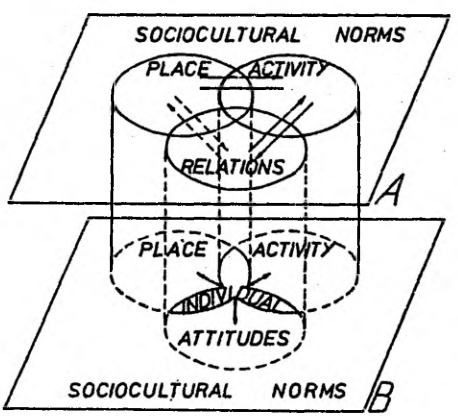


Figure 37.3. A scheme for analyzing human–environment relationships (A) the level of the social unit; and (B) the level of the individual. (From "Privacy Preferences of Family Members," by T. Niit and T. Lehtsaar, 1983. In H. Mikkin (Ed.), *Problems in Practical Psychology*, 1983. Copyright 1983 by Tallinn Pedagogic Institute. Reprinted by permission.)

group level could be called "the behavioral way of life." Such a way of life could be characterized both quantitatively (frequency of various activities, variety of activities, etc.) and qualitatively (see Niit, 1983c).

Depending on the specifics of place, there may be more or less significant parameters and dimensions for describing the functioning of the system. During such an analysis, we have to descend to the level of the individual to incorporate his or her attitudes that arise in the course of the functioning of some social unit into the complex picture. When, at the level of the social unit, the individual is a component of the sociophysical system, at the level of the individual, the analysis is possible only when confronting him or her with the environment. At this level we have to deal with attitudes instead of relations (see Figure 37.3.), either toward place (e.g., place identity), other people (emotional relations), one's own activity, or the activity of others. At this level, the individual is constrained by parameters of place, the activity of others, and their attitudes and, trying to balance these, he or she seeks a niche "to build himself or herself into the environment." At the same time, the individual connects in himself or herself activities, attitudes, and, through his or her physical existence, the parameters of place.

Thus the processes and phenomena that we have examined are partly overlapping and partly different at the different levels of analyses, but, from the viewpoint of environmental design, we should not restrict ourselves to the level of the individual only as much of environmental psychology has done until now. At the level of the social unit, there is no need to use the term *environment* at all. At the level of the individual, the environment consists of several realities, with which the individual confronts himself or herself.

IX MASS HOUSING AND PSYCHOLOGICAL RESEARCH IN THE SOVIET UNION. **J. KRUUSVALL.** ENVIRONMENTAL POLICY. ASSESSMENT & COMMUNICATION (ETHNOSCAPES: VOL.2). Ed. by D. Canter, M. Krampen & D. Stea. Aldershot: Avebury, 1988, pp.147-174.

9. Mass housing and psychological research in the Soviet Union

JURI KRUUSVALL

INTRODUCTION

In the Soviet Union industrial housing construction has always been connected with quantity, with the need to improve the living conditions of as many people as possible. Very often it had to be done at the cost of amenities and it resulted in psychological dissatisfaction. In the first years of the Soviet regime small flats were built mostly to make it possible for every family to have their own home. As the cost of construction of smaller flats is much higher, it was decided by the 1930's to build bigger, the so-called "communal" flats where each family had only one room.

Although initially such communal living was in accordance with historical tradition, a psychological need for private space at home became more acute with growing urbanisation, in order to compensate for the growing amount of social stimulation from outside the home.

After World War II, it was only at the end of the 1950's that industry reached such levels that the building of small one-family flats on a mass scale could be started. Again this was done at the cost of quality (it was necessary to build as quickly as possible). Because of their small size those flats did not satisfy the need for privacy and did not provide the possibility of developing domestic housekeeping. At the same time there were many theories among architects that encouraged more and more housekeeping activities to take place outside home - in the sphere of services (the best-known of these theories is the project of a collective neighbourhood by G A Gradov in 1968). But as the experiments revealed, people were unwilling to give up housekeeping and, in addition to this, the service

system was not of such a high level as to satisfy the needs of the whole population.

During the period of 1976-1980 51 million people have improved their living conditions in the Soviet Union. In 1980, for example, about 2 million new flats were built - this is about 105 million square metres of new living space. In 1980 there was about 13.1 m^2 of living space per person, on the average 3.15 inhabitants and 2.25 rooms (Meerson and Tonsky, 1983). The rent for flats is one of the lowest in the world, by the way. But there is still a shortage of flats (in 1980 only 2/3 families had a flat of their own). Mass housing construction must be continued. At the same time the layout of flats is too similar and cannot satisfy the needs of different families who have different ways of life.

According to Orlov (1981), only 40% of families use their flat as intended by the architects. As building organisations spend all their resources on dwelling construction, it is not possible to build cultural establishments and service centres in new residential areas. People are often forced to go to the centre or other districts of the city, putting thus additional pressure on public transport. In addition places of work are often very far from residential areas as well. There are also problems with the planning of new residential areas, keeping them in order and using the neighbourhood of dwellings.

The interest in social and psychological problems of housing has proceeded from two perspectives. On one hand, architects have tried to find social and demographical bases for apartment layout typologies (cf. Rubanenko et al. 1975; Rubanenko, Kartashova, 1982). On the other hand, psychologists and sociologists have observed the impact of increasing urbanisation of city families and tried to discover basic dimensions of home experience and domestic activities. In the present paper we focus mainly on the studies that represent the second perspective (see Table 1).

DIFFERENT TYPES OF DOMESTIC WAY OF LIFE

One of the first empirical studies of home environments was carried out from 1970-1974 in the Laboratory of Sociology at Tartu State University with a grant work from the All-Union Research Institute of Industrial Design. We will deal with the theoretical basis of this research project in greater detail as the methodology used formed the theoretical basis for more recent studies by the Environmental Psychology Research Unit in Tallinn (cf. also Kruusvall, 1979). One of the central concepts of the above-mentioned research programme was activity. All the main activities of family members, both, at home and outside were taken into account.

Every activity can be considered as a conventional "act of production", the environment of this activity consists of the subject of activity, the means of activity (object, instruments, activity space), the product of activity and the process (which characterises the change of the components of the environment where activity takes place in time).

Table 1

The Research Project	Time	Place	Number of Respondent Families	Sampling Method	Number of Separate Items	Institutes and Researchers
I	1971/72	10 different types of settlements in Estonia (from village to city)	2000	represent-ative	1600	All-Union Research Institute of Industrial Design; Tartu State Univeristy (J. Kruusvall, M. Lauristin, T. Raitviir).
II	1975/76	Moscow, Pskov, Tallin, Tartu (new residential areas)	640	directed	680	Central Research and Experimental Planning Institute of Residential Buildings (K.K. Kartashova, S.D. Albanov, V.A. Ovsgannikov, V.S. Koloskov); Tartu State University (M. Heidmets, J. Kruusvall).
III	1978/79	Ivano-Frankovsk, Kiev, Leningrad, Liepaja, Lvov, Novosibirsk, Simpheropol, Tallinn, Tashkent, Togliatti, (new residential areas)	1800	directed	340	CREPI of Residential Buildings; Tallinn Pedagogic Institute, Environmental Psychology Research Unit (M. Heidmets, J. Kruusvall).
Tartu research project	1978/79	Tartu	1070	represent-ative	640	Tartu State University (M. Preem, L.M. Tooding).
IV	1981/82	Alma-Ata, Brovary, Dushanbe, Yakutsk, Kazan, Krasnoyarsk, Norilsk, Rostov-upon-Don, Tbilisi, Ust-Kamenogorsk (new residential areas)	1750	directed	340	CREPI of Residential Buildings; Tallinn Pedagogic Institute, Environmental Psychology Research Unit
V	1984/85	Moscow, Tashkent, Tallinn, Yakutsk, Kiev, Leningrad, Novosibirsk, Tbilisi, (new residential areas)	900	directed	160	CREPI of Residential Buildings; Tallinn Pedagogic Institute, Environmental Psychology Research Unit

Table 2. A system of parameters for the description of environment (adapted from Kruusvall, 1979).

Parameters of environment	Subject (caterer)	Means of Activity			Product	Process
		Instrument	Object	Place		
Distance of subject from environment	Social distance from consumer	-	-	Distance of place of activity from home	Distance from final product	Duration of activity
Degree of organization	Organizational structure	Degree of mechanization	Degree of preparedness	Degree of separatedness	Degree of integrity	Frequency of activity
Degree of multifunctionality	Degree of specialization	Degree of universality		Degree of multifunctionality	Quantity of different products	Number of different functions
Degree of substitutability	Existence of different service Possibilities	Possibility of replacement with means of different kind			Replaceability of the product	Replaceability of the mode of action
Degree of ordinariness or Originality	Distribution of different services	Distribution of the utilised means in the environment			Originality of the product	Distribution of the mode of action
Degree of outdatedness	Degree of lagging behind compared to latest developments	Physical and moral outdatedness			Moral outdatedness of product	Moral outdatedness of mode of action
Material Value	Material Status	Value (price) of means			Value of product	Complicatedness of action
Quality	Social Status	Socio-cultural value of means			Quality of product	Attractiveness of activity
Orientation of subject toward environment	Desirable service-worker	Preferred means of action			Desired product	Desirable activity

If family members perform certain activities for themselves (prepare meals or sew their clothes themselves, etc.) they themselves are subjects of action. If they use services of other people who are not members of their family (e.g. a relative, an acquaintance, a private entrepreneur, a state service enterprise, etc.) activity is considered to be the action undertaken by a family member to get this service done, not the service itself.

The environment of every activity can be characterised by 9 parameters (distance from consumer, degree of organisation, multifunctionality, possibility of substitution, degree of standardisation, degree of outdatedness, degree of value, quality and orientation towards environment).

The distance from consumer can be measured from the social viewpoint. In this case it characterises the consumer's relations to the caterer - the distance is zero when a person caters for himself, in the case of individualised catering the distance is medium-range, and in case of mass catering it is maximum.

Distance can be measured also from the viewpoint of the product (whether the result of activity is a product ready for consumption or a semi-manufactured product), from the viewpoint of space (how far from the consumer's dwelling or place of residence the action takes place), or from the viewpoint of time (how long does it take to complete the action).

The organisation of environment can mean the social organisation of the subject of activity (a small group activity or a big service firm), the degree of mechanisation of activity, the degree of preparedness of the object - ready-made or semi-manufactured (e.g. food used at home), the spatial isolation of the activity from other activities, the degree of completeness of the product (whether the result of activity is a completed product or only a part of it) or the process of activity, its organisation in time (frequency).

Multifunctionality of environment expresses the degree of specialisation of the subject (whether it is performed by a family member or a service enterprise) of the activity (whether he does something else beside this activity or not), universality of instruments (how many different activities can be carried out with them), multifunctionality of space (rooms, cupboards, etc.), the number of different products (results) of this particular activity, or the number of different functions of the activity itself. Other parameters can be construed similarly. All nine parameters are concisely presented in Table 2.

Every activity of a family was measured with the help of the above mentioned parameters. The standardised interview consisted of 1600 items. 2000 families from different types of settlements (from village to city) and representing very different types of dwellings were chosen in Estonia. As a result of computer analysis, seven different types of domestic way of life were distinguished. Two types of parameters had greatest power of differentiation: social distance of services and the degree of mechanisation of domestic activities. The first differentiates mainly among urban, the second among rural families.

We present a short description of these 7 types of domestic way of life:

(1) Urban- non-domestic way of life is characterised by the following features - many activities have been transferred to the space of services, the degree of mechanisation of household activities is low and the household is monofunctional. A negative attitude towards several household tasks (repairing, gardening, etc.) is characteristic of this group. This group consists mainly of families with few or no children at all, or single people who live in small flats in the centre of the city or in new residential areas.

(2) Urban - family-centered way of life. Many activities have been transferred to the sphere of services, but there are domestic activities as well. The degree of mechanisation of household activities is quite high. This group has an orientation toward non-domestic sphere of services and has a negative attitude towards activities that have to be performed at home. This group consists mainly of families with one or two children and who live in new residential areas.

(3) Urban way of life without modern conveniences. It is characteristic of inhabitants of older city dwellings where flats are without modern conveniences. Therefore, their orientation to the sphere of services is forced upon them to a certain extent. This group consists of younger or older single people or families with few children. Many of them can improve their living conditions during their lifetime.

(4) Urban way of life characteristic of elderly people. This is characteristic of elderly people who come from the country or from a small town and - living in a city flat - continue to live according to their rural way of life. The service system is hardly ever used, the degree of mechanisation at home is very low, domestic activities are more appreciated than out-of-home activities.

(5) Urban-rural way of life characteristic of small towns. Service system is used sufficiently, the degree of mechanisation at home is average. Orientation to domestic activities prevails. People belonging to this group live mainly in one-or two-storey houses belonging to one family, with a garden attached.

(6) New urban-rural way of life can be found mostly in new rural settlements were the services are not very well developed. To this group belong families who live in big flats, one-family houses or houses built for several families. To make household tasks easier, very many technical appliances are used - the degree of mechanisation is the highest in this group. Thus, many household tasks have become favourite occupations. The number of family members and children is large. People are relatively young and many of them use various machines in their everyday work as well. This is one of the most pervasive ways of life in those rural situations where a new agrarian-industrial economy is developing, i.e. a transition to an agro-industrial management of the economy is taking place.

(7) Traditional rural way of life. This group consists mostly of elderly people who live in traditional farm-houses, with auxiliary farming attached to it. Orientation to domestic activities prevail (service enterprised are far from home, the degree of household mechanisation is low. There are difficulties in repairing and taking are of machines.

DOMESTIC LIFE-STYLES IN THE CITY

Since 1974 the Environmental Psychology Research Unit (at present affiliated with Tallinn Pedagogic Institute) has continued to study the domestic way of life with funding from the Central Research and Experimental Planning Institute of Residential Buildings. Way of life of families in standardised flats in new residential areas were investigated. (see Table 1). The second research project was carried out in 4 cities of the Soviet Union, the third project was carried out in 10, the fourth in 10 more and the fifth project in 8 cities of the Soviet Union. All in all, over 4000 families were interviewed in more than 20 cities. The selection of families in all the projects was directed. It was necessary to find a certain type of family (up to 16 different types) and a certain type of flat (from 1- to 4-room flats) and their main combinations.

Therefore, the following data about average living conditions are, to a certain extent, more extensive than the average statistical data in the Soviet Union. Moreover, in different studies different regions of the Soviet Union are represented (in the third project mostly the Western regions, in the fourth mostly Eastern and Southern regions) and that has a certain impact on the results.

In addition to our own research, we have made use of the data of the researchers of Tartu State University M Preem and L M Tooding who carried out studies in Tartu in 1978 and 1979. A standardised interview (using more than 600 single items) was used to study the distance of services (actual and desirable) from home, frequency of domestic activities and frequency of using services, the spatial organisation of family activities at home, the number of members in domestic activity groups, lack of space and personalisation of space at home, activities inside dwelling and in its vicinity, etc. (cf. Kruusvall, Heidmets, 1979).

Such selection of respondents made it possible to identify regional and cultural differences in the domestic way of life of inhabitants of new residential districts, as well as differences that arise from differences in apartment planning and number of rooms, differences in demograhic profiles of families, etc. The main result of the study has been to make apparent the necessity of differentiated planning of city-dwellings and to work out practical advice for such planning.

The height and configuration of dwellings

The comparison of the data shows that, on average, the highest dwelling-houses in the world are built in the Soviet Union. In most cities the building of 9-storey houses (40% of the houses built in 1980) prevails now over the building of 5-storey houses (38% in 1980).

In bigger cities even 12-, 16- or 22-storey houses are built. The increasing height of dwellings is, on one hand, connected with economic use of urban territory, on the other hand, higher dwellings make it possible to economise on building foundations and other necessary technological sysems (sewerage, etc.). At the same time the results of several studies indicate that people do not want to live on higher floors. We present the data of the third, fourth and fifth studies that were carried out among more than 4400 families in more than 20 cities that show (in per cent) which storeys are more preferred.

The preferred storey	1	2	3	4	5	6	7	8	9 and higher
Families (in %)	4.4	20.3	31.7	15.9	13.3	3.7	3.6	2.1	4.9

We can see that over 80% of families would like to live on the 2nd, 3rd, 4th or 5th floors. 1/3 of families would prefer the 3rd and 1/5 of families the 2nd floor. The ground (1st) floor and the higher floors (beginning with the 6th) are unpopular.

Figure 1 shows on which floor the family lives at present, the floor on which it lived before and the desirable floor (the data of the fifth study). The upper diagram shows that there is no correlation between the floor of the previous flat and the floor of the present flat. It is not taken into account in distributing new flats on which floor families lived before. On the average, the floor of the previous flat does not exceed 3.2; thus most families in new flats live on a higher floor than they did before.

The higher the present floor, the higher the desirable floor but even a person who lives on the 9th floor at present does not want to live higher than the average of 4.5 floors.

Figure one indicates the proportion of families (in percent) who lived on the same floor before and would choose the same floor if given the possibility. The streaked part in every bar shows the number of families who previously lived on the same floor and also in the future would like to live on the same floor. All the 3 parameters are the highest on the 2nd and 3rd floor and diminish the higher the floor becomes. 1/3 of the 1st floor inhabitants lived previously on the 1st floor as well, but only 5% would choose the 1st floor again. The diminishing popularity of the 1st (groun) floor is directly connected with the social and environmental changes that take place when a person moves from a city's older regions to regions of mass construction. Living on higher floors is burdening - both, in a practical and a mental sense, and it is connected with the developing of negative self-esteem in the case of many families. For example, on the 1st floor 22% of people do not want to have neighbours who have similar vocation or occupation. On the 2nd and 3rd floor this percentage is 28%, on the 4th and 7th floors 34% and on the 8th and 9th floors 38% of the respondent families.

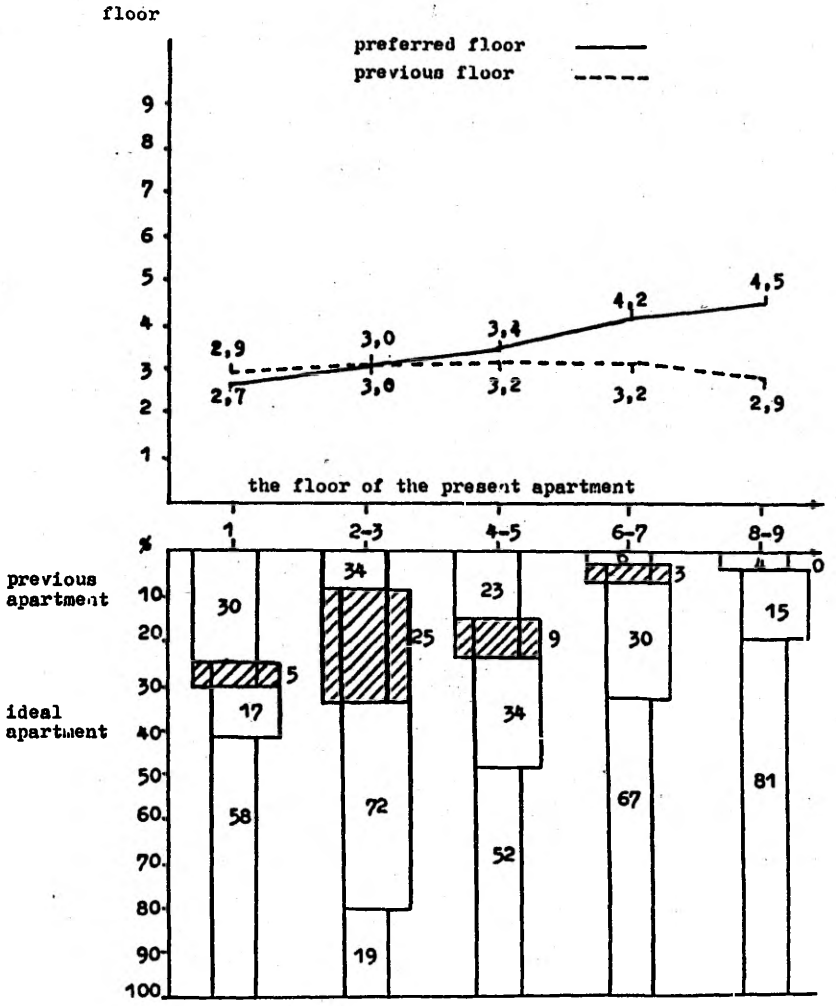


FIGURE 1. The interrelationships between the floor of the present apartment and previous place of residence with the preferred floor of an ideal apartment.

The floor where a person lives influences also activities in the "yard". The higher the floor, the less the inhabitants use the "yard" or the vicinity of the dwelling. Thus, the "yard" is used for some activity once a week or more frequently by 36% of men and by 43% of women, living on the 1st (ground) floor. On the 4th and 5th floors the same percentage is reciprocally 33% and 38% and on the 8th and 9th floors 19% and 32%.

All the presented data are in favour of lower houses and if people's needs were also taken into account, it would be necessary to start planning only two-to five-storey houses as soon as possible. The first floors of such houses should be given over to offices and enterprises, communal rooms for inhabitants, etc.

Together with the increase in mass housing construction in the 60's and 70's, regular streets and districts were given up in planning new residential areas and the so-called "free" planning began to prevail. Together with the disappearance of streets, boundaries between private and public territories also disappeared, as well as closed yards around dwellings. Gardens and hedges around communal dwellings in older parts of cities were also destroyed. The idea was that the territory of the whole residential area was to become a well-kept park. Residential areas built according to free planning looked nice only on a plan or from the air. Reality proved that beautiful is not always necessarily practical. It appeared that inhabitants could not sufficiently identify themselves with this communal public territory. In an open yard in which everybody could pass by, people cannot communicate in a normal way any more. They cannot leave their children to play in the yard or to perform household tasks there. The attitude towards the territory surrounding the dwelling becomes worse because inhabitants themselves have not participated in creating the environment around the house. If the inhabitants themselves do not damage the environment, they do not usually protect the neighbourhood from those who spoil it, either.

During the fifth study 3 types of dwellings with different types of environments were investigated: mutli-storey houses with the environment open from all sides; houses built in a row closed from one side, and houses built at an "angle" closed on 2 or 3 sides. The following table presents the data (in per cent) about men who use the yard for some activities, depending on the degree of its closedness.

Table 3

	5-storey houses	9-storey (or higher) houses
multi-storey houses	-	27
houses built in a row	31	31
houses built at an angle	38	35

The more closed the yard is, the more people use it. In the case of multi-storey houses 30% of inhabitants consider the neighbourhood to be their territory; in case of houses built in a row 40-50%, and in case of houses built at an angle over 60% of the interviewed families consider the vicinity of the house to be their territory. In the case of multi-storey houses and houses built in a row, 32% of inhabitants would be ready to plant a green belt around the house together with other inhabitants, and in the case of houses built at an angle, 43% of the interviewed people would be ready to do the same. Thus, the more closed the territory is, the more ready the inhabitants would be to do something together in the yard. The more closed the yard is, the more would people be ready - of their own free choice - to live in new standard dwellings and in new residential areas.

Among different family types families with children under school age (from 3 to 6 years of age) and elderly people need a closed yard more of all. Families with small children (up to the age of 3) do most of the household tasks in their flats. In the yard they mostly walk with their children. Families with no children at all and familites with school-age children spend little time in the yard. The last-mentioned families would like to have a private garden more than all other types of families.

Naturally, the use of the yard depends also on the size of the dwelling. Forming a closed yard of multi-storey houses would not produce the expected result as inhabitants of the upper floors cannot use the yard, there would be many passers-by (inhabitants of the upper floors), the lighting conditions would become worse, etc.

The residential area; dwelling, and acquaintances

The answer to the question in which district of a city families would prefer to live if they had free choice shows a certain evaluation of new residential areas in general. The results of the three research projects concerning this question are given in Table 4. We can observe that during recent years the popularity of the centre of the city as a possible living district has increased among the residents of new districts. The popularity of new residential areas as well as suburbs has diminished. This tendency can be explained by the uneven development of the services in different regions of the city. New residential areas are planned together with all the necessary cultural and service establishments but, as a rule, dwelling houses are built first of all (to give people new flats as quickly as possible), but it takes years to build service enterprises because there are not enough material resources and labour power for this. The authorities whose responsibility it is, try to build new service enterprises in the centre or near the centre of a city where there are enough customers and clients during the whole day. Therefore, it can be understood why people want to live in the centre of the city as well. Therefore, the main way to make new residential areas more popular is to develop local services more quickly.

Table 4

Proportion of people preferring different residential areas

The desirable residential district	the 3rd study 1978/79	the 4th study 1981/82	the 5th study 1984/85
the centre of the city	37.0	42.3	51.6
new residential area	41.6	41.0	33.2
suburbs	13.8	10.1	10.1

The centre of the city is relatively more popular in the cities of the southern republics of the Soviet Union and in the cities of Siberia. In bit cities (Moscow, Leningrad and Kiev) new residential areas are, relatively, more preferred, also in the cities of the Western region. In industrial cities and in such cities where there are suburbs with gardens, suburbs are preferred.

In new residential areas families usually live in large houses (with scores or even hundreds of flats). In older districts there are also smaller houses (sometimes only with several flats), in suburbs one-family houses prevail.

In Tables 5 and 6 we present data (in per cent) showing how many of the respondent families in large houses would like to liver in different types of dwellings.

Table 5

The desirable residential dwelling	the 3rd research 1978/79	the 4th research 1981/82	the 5th research 1984/85
a large house	31.9	45.9	40.6
a small house	31.6	32.5	33.3
a one family house	29.6	20.4	19.3 .

Table 6

The Tartu research 1978/79

want to move	from a large house	from a small house	from a one-family house
into a large house	31.0	10.8	3.9
into a small house	42.5	62.6	19.3
into a one-family house	26.5	26.6	76.8

According to the results of the third research project as well as the Tartu study (Table 6), about 31% of families would choose a large house. Another third (in Tartu 40%) would like to live in smaller houses and a little more than 1/4 of the respondent families living in large houses would choose a one-family house. The more recent fourth and fifth research projects show that the popularity of large houses has increased and the popularity of one-family houses has decreased among families living in large houses. This does not mean that people have become satisfied with very large houses (see the following assessments of multi-storey houses) but this means that, on one hand, it is due to the developing urban way of life (people are becoming accustomed to living in large houses) and, on the other hand, due to the fact that flats in large houses are becoming bigger and better-planned and more elaborate all the time.

One must bear in mind also the fact that the fifth research project was carried out mostly among families living in relatively good conditions. At any rate, according to the results of the Tartu research (see Table 6) only 31% of the residents in large houses chose the same type of houses as where they already lived, in smaller houses this percentage was 63% and in one-family houses 77%.

Regional differences can also be brought out in the choice of the type of dwelling. According to the results of the 3rd research, in big cities and in some cities of Siberia, people are apt to prefer large houses, in the western and southern regions of the Soviet Union people prefer small houses and one-family houses.

The extension of neighbourhood and the number of acquaintances is also connected with residential areas and the type of dwelling. The results of the research projects also refute the statement that residents in large houses have many acquaintances. In Table 7 we present the data of the third and fourth research projects (in per cent) giving the number of families in the same house with whom close contacts have been established.

Table 7

	0	1	2	3	4	5	6	7	8	9	10
III	15.1	18.5	21.3	16.1	10.2	6.7	2.8	1.2	1.0	0.3	3.8
IV	13.7	14.4	17.9	15.5	12.1	11.0	3.9	2.3	2.2	0.7	2.9

We see that 13-15% of families have not established close contacts with any other families at all, nearly 90% of the respondents do not have more than 5-6 other families with whom they have close contacts.

According to the results of the fifth study 53% of the respondents have at least one person living on the same floor with whom close contacts have been established, 41% have close contacts with people living in the same section but on other floors and 22% of the respondents have close contacts in other sections of the same house.

Researcher Nikolayenko (1985) from Simpheropol studied the changes in acquaintance groups when a person (within a family) moved from one-family houses, with a garden attached, to large houses in the same neighbourhood. The results of the research showed that small groups connected with the previous neighbourhood disappeared, but during the 3 years of the observation period practically no new close(r) relations developed with neighbours within the large houses. The previous small groups that had developed, not only because of the common neighbourhood but also because of certain common activities or hobbies, were preserved when a person/a family moved to a large house but the number of contacts decreased. In new houses it was easier for children and elderly people to establish contacts; it was more difficult for middle-aged people.

The results of our research projects (the 3rd and 4th) show that the acquaintances, friends or relatives of people who have moved to new residential areas are mostly in other regions of the city (see Table 8).

Table 8

Proportion of people with friends in various locations relative to their house

Study	in the same section of the house	in the same house or in the neighbouring house	in the same micro-region	in other parts of the city	in other cities
III	4.5	11.9	24.9	78.9	37.5
IV	8.7	26.2	33.0	80.6	-

The respondents could give 2 answers, that's why the total percentage exceeds 100%.

In case of the fourth research project the variable "in other cities" was not included. We can observe that although 40-60% of families have closer relations in the same neighbourhood, 80% of families have acquaintances, friends or relatives in other parts of city.

In Table 9 we present the data (in per cent) concerning families who visit their friends, acquaintances or relatives or receive them in their place once a week or more frequently (the data of the 3rd and 4th research projects).

Table 9

Proportion of people having weekly contact

Every week	pays a visit to a friends, etc.	receives guests at his place
Project III	33.7	26.6
IV	37.0	62.0

It appears that during the period between the two research projects the intensity of receiving guests at one's own place has considerably increased. To a certain extent, this can be explained by a different formulation of the question (in case of the 3rd research project a special reception for guests was stressed, in the case of the 4th research project the question was formed so that more casual visits - like an acquaintance dropping in - could also be taken into account. To a certain extent, this can be explained by better living conditions and the better layout of flats in the case of the fourth research

project. It can also be noticed that inhabitants of new residential areas now receive guests more often than visit other people. If acquaintances and relatives living in other parts of the city are taken into consideration, it can well be explained. For 50-60% of the inhabitants of new residential areas it takes nearly an hour to reach their place of work (not to speak of shopping, going to service enterprised, etc.). So, quite often they do not have either the time or the strength to go for a visit to some other part of the city.

Acquaintances and relatives, living in other parts of the city (in the centre, in older regions, etc.) whose living conditions are usually not so good, are willing to visit inhabitants of new residential areas.

The determinants of satisfaction with flats

The respondent families are, in general, satisfied with their flats in new houses. According to the results of the 2nd, 3rd and 4th research projects, about 65-70% of the respondents are satisfied with their flats, about 20% are not satisfied.

This can mainly be explained by 3 factors:

(1) Nearly all families who had got a new flat could thus improve their living conditions - the new flat was bigger than the old one. According to the results of the 2nd research project, families had, on the average, 1.4 rooms per 3.8 persons in their previous flat; the new flats they had 2.4 rooms per 3.8 persons. On the average, the flat has become one room larger.

According to the results of the 3rd and the 4th research projects, 85% of respondents consider the new flat better than the old one. The same results show that the inhabitants' demands for the ideal size of a flat are not very pretentious, either. The ideal size of a flat does not exceed 5 or a maximum of 6 rooms. The general data are presented in Table 10.

Table 10

Average flat sizes

	the number of family members	the number of rooms in flat	the desirable nr. of rooms min / max	
III	3.64	2.58	3.27	3.87
IV	3.54	2.56	3.05	3.67
the Tartu research	3.4	2.4		3.54

It appears that the desirable number of rooms does not depend on the actual number of rooms in the flat. The results of the 3rd and 4th research projects are more or less the same. We might point out that the minimum desirable number of rooms is, on the average 0.4-0.5 less than the number of family members but the maximum desirable number of rooms is 0.1-0.2 more than the number of family members. Thus, we can say, in general, that the respondent families in new residential districts would like to have a flat where the number of rooms is the same as the number of family members, but they are satisfied also with the present conditions where the number of rooms is one less than the number of family members.

This is also confirmed by the Tartu research results. The authors of that research project found that the size of family relates more to the desirable number of rooms than to the actual number of rooms (the correlations are accordingly 0.71 and 0.46).

We can draw a conclusion that the actual number of rooms quite often does not correspond to the necessities, derived from the size of a family.

(2) Another factor that makes people more satisfied with their new flats is that the layout of the flats, their technical equipment and elaboration are improving all the time. At the beginning of the era of mass housing construction, kitchens in flats were relatively small because of the conception that in new bigger flats kitchen will be only a place where meals are prepared and that inhabitants will have their meals in the living-room. But, in practice, most families have their meals in the kitchen - the size of the kitchen and the largeness of the flat have nothing to do with this. Besides, many people perform a good deal of household tasks in the kitchen, as well as receive their guests there.

According to the results of the third research project 1.5 - 2.0 individual-functional (maximum 6) and 3.0 - 3.5 (up to 7) socio-spatial activities are performed in kitchen. In newer flats kitchens are much larger now but people would prefer even bigger kitchens.

Initially places of storage were not put into flats either. It was thought that city dwellers do not need re-positories. But it appeared that there are a lot of seasonal commodities (some of them quite big), as well as old things that had to be kept somewhere. Now places of storage are also planned in flats.

(3) The third reason that makes it possible for people to be content with relatively small flats is the considerably low level of productive domestic activities in city conditions.

We can see this in Table 11 where the proportion of some productive domestic activities are presented, according to the results of the third and fourth research projects. Data about the need for an additional room for such activities are also given in Table 11, according to the results of the third research project.

Table 11

Percentage of domestic activities	every day III/IV	every week III/IV	additional room is necessary III	additional room is desirable III
work connected with occupation and self-improvement	7.5/20.3	9.8/18.4	10.7	7.7
hobbies	7.2/10.3	15.7/22.4	6.8	10.7
sewing, knitting repairing of clothes	11.2/11.2	39.0/42.2	10.7	24.0
repairing of household appliances making new things and appliances	2.3/3.3	14.8/17.1	12.1	26.9

Table 12

Percentage of uses if an additional room were available according to current circumstances

How an additional room would be used	no idea	a private room (children's room, bedroom, a personal room)	a study or a work-room	satisfaction with flat
the number of people and rooms	III/IV	III/IV	III/IV	III/IV
the number of rooms is the same as the number of family members	33/22	26/28	24/35	86/85
one room less than the number of family members	10/ 5	68/63	11/23	70/72
two rooms less than the number of persons	3/1	82/80	6/8	40/40

According to the data of the third research project, 7% of families had a study or a work-room in a 3- or 4-room flat. According to the data of the fourth research project it was 12%. About 30-40% of the respondents admit the necessity of having a study or a work-room in their flat but if given one more room, only 14.3% of the third research project and 22.7% of the fourth research project respondents would use this additional room as a study or a work-room.

Table 12 presents the percentage of the use of an additional room and satisfaction with the flat. Living conditions have also been taken into account, according to the results of the third and fourth research projects.

We can observe that in bad apartment conditions the wish of family members to separate from each other is prevailing but when the number of family members and the number of rooms is the same 20-30% of families would not know how to use an additional room and only 1/4 to 1/3 of families would use it as a study or a work-room. In larger flats personal division of rooms prevails and as the last row of Table 12 shows, satisfaction with the apartment decreases considerably only in conditions where there are two rooms less than the number of persons. In our opinion personal division of rooms in flat proceeds not only from people's psychological needs but also from the social relations of family members.

The flat and the social organisation of domestic life

In the case of people who have a traditional way of life, social status of family members is based on their role in domestic activities and the rooms in a flat are distributed more on a functional principle (kitchen, dining-room, work-room, bed-room, etc.).

In city conditions family's social life shifts from activity basis to territorial-spatial basis. In this case, personalisation becomes a socially determined process where family members "force" each other into separate rooms, (Kruusvall, 1980). This tendency is especially apparrent in the case of children and men (who do not have many possibilites for activities in a city flat) and grandparents (with whom young people often do not want to live together on social grounds). The results of the research projects show that a personal room is given first of all to grandparents, then to children.

It seems that the process of personalisation apparent in city flats is a complicated phenomena that includes psychological as well as domestic and non-domestic social factors.

We have tried to measure the similarity or difference of families, according to their type of domestic activities. For this purpose we have used the entropic characteristics (according to Shannon's formula). More entropy shows larger unpredictability of domestic activities of a population and this can be conventionally considered positive (a population with greater inner heterogeneity is more viable). Less entropy shows the presence of certain types of activities at home, greater predicability of domestic activities. It is easier to guess what takes place in the home.

In the third research project, 8 types of families on the basis of domestic activities connected with everyday needs and 8 types of families on the basis of leisure activities at home, were distinguished.

Table 13 presents the average entropy of these types of activities in relation to the size of the flat (in comparison with the number of rooms and the number of family members). We can observe that the bigger the flat, the bigger the unpredictability of domestic activities connected with everyday needs, but the entropy of leisure activities diminishes, the bigger the flat becomes. In the case of worse apartment conditions (greater crowding) the unpredicability of activities connected with everyday needs and leisure activities is more or less the same. In case of bigger apartments, the type of everyday activities becomes the feature that distinguishes different homes, while leisure activities at home becomes relatively more similar.

Table 13

Nr. of people and rooms	Nr. of respondent families	Domestic activities connected with everyday needs (8 types of families)	Leisure activities at home (8 types of families	Use of kitchen (225 variants)	Use of Living-room (490 variants)
the same	398	2.8	2.2	4.1	6.3
1 room less than the nr. of persons	872	2.6	2.3	4.8	7.4
2 rooms less than the nr. of persons	525	2.4	2.4	5.4	6.9

On the basis of data from the above research, all possible combinations of activities were found for all rooms of the flats. For example, the kitchen was used in 225 different ways, in the case of living-rooms there were 490 different variants. Table 13 presents also data about the entropy of the use of living-rooms by groups depending on the size of flat. We can observe that the diversity of using the kitchen decreased when the number of rooms in a flat increases. The unpredictability of using living-rooms is the biggest in these cases where the number of rooms is one less than the number of persons and decreases even more considerably when one room is added (when the number of rooms is the same as the number of family members).

Table 14

	Nr. of respondent families	Domestic activities connected with everyday needs (8 types of families)	Leisure activities at home (8 types of families	Use of kitchen (225 variants)	Use of Living-room (490 variants)
4-6 activities performed "together"	825	2.6	2.2	4.8	7.2
3-6 activities performed separately	880	2.6	2.2	5.0	7.6
a separate room is needed for 2-7 activities	886	2.6	2.5	5.3	7.2
a separate room is needed for 8-13 activities	799	2.6	2.2	4.5	7.2

These data make it possible to plan standard flats more exactly. Thus, bigger and more univeral kitchens should be built in flats with less rooms and smaller rooms in larger flats (that up to now have been planned as bed-rooms) should be planned so as to make it possible to use them for a greater variety of everyday actions.

The parameters given can also be connected with the features characterising families' style of activities. We can distinguish between 2 groups of families by counting how many activities are usually performed "together" and how many activities are performed "separately" (by every family member). One group of families performs many activities "together", the other group "separately".

The data in Table 14 reveals that the populative unpredictability does not depend on everyday domestic activities and leisure activities home "together" or "separately", but that the use of kitchen and living-room does depend on this. The variety of using kitchen and especially living-room is greater in the group of these families where people act "separately" at home. Families can also be distinguished by how many activities there are for which a separate room is necessary. Table 14 shows that the type of everyday domestic activities and the use of a living-room does not depend on this differentiation. But unpredictability in spending leisure time and the use of the kitchen is greater in the group of families where there are less activities for which a separate room is necessary. The data shows that activities performed "separately" can increase and activities for which a separate room is needed can decrease unpredictability of domestic life in a

population. Therefore, an indirect conclusion can be drawn that personal privacy at home is positive (increases overall variety) only so long as it does not occupy a whole room (as long as there is no personal distribution of rooms among family members). We may hypothetically presume that when the number of rooms in a flat increases, it is the socially conditioned personalisation of rooms that brings about the decreasing unpredictability of leisure activities of home and the use of the kitchen (compare Tables 13 and 14). At present, this is only a hypothesis, the validity of which must be proved by further analysis. According to the results of the third research project (Kruusvall, 1981) apartment conditions and the demographic composition of families are connected with the character of social organisation of domestic activities in the following way:

(1) the number of rooms in an apartment influences the activities performed separately - the greater the number of rooms, the greater the number of activities performed by family members alone or separately;

(2) the layout of a flat influences the number of activities performed together. The number of activities performed together is greater in flats with bigger and more isolated rooms than in flats with smaller and not isolated rooms. This conclusion confirms the fact, well known in environmental psychology, that in order to perform activities together successfully, there must be sufficient space to make it possible for the members of a group to isolate themselves from time to time.

(3) An infant in a family increases the number of activities performed together and decreases the number of activities performed separately. School children, on the contrary, decrease the number of activities performed together and increase the number of activities performed separately.

(4) An increase in the number of children decreases the number of activities performed together but it does not increase the number of activities performed separately. The number of activities performed sometimes together and sometimes separately increases.

(5) The sex of children (same or different) does not influence the number of activities performed together but the number of activities performed separately increases slightly in families with children of both sexes.

(6) When there is a grandparent in the family the number of domestic activities performed separately increases.

(7) Comparing the cities of the Soviet Union, there are more activities performed together in the cities of the Southern regions. Activities performed separately are more common in the cities of the Western regions and the big cities where urbanisation has greater influences on the way of life.

Proceeding from activities performed together or separately by family members we divided domestic activities into 2 classes (Kruusvall, 1984):

(1) Social-spatial (SS) activities of which several family members take part and for which ample room is necessary (functional needs and demands are of second-rate importance), e.g. eating, watching TV, receiving guests, etc;

(2) individual-functional (IF) activities that are usually performed alone and for which certain functional equipment (place of work, appliances) and separation from other activities are necessary, e.g. cooking meals, washing, sleeping, working or studying, children's play etc.

We examined the localisation of these two types of activities in different rooms at home and the dependance of the frequency of these activities on the size of separate rooms and the composition of the family in relation to the results of the third research project. In the kitchen and in living-room SS activities, and in smaller rooms IF activities, prevail. When the number of rooms increases the number of activities performed there generally decreases. In the kitchen the relatin of IF and SS activities remained constant (on the average there was 30-40% IF activities).

In bigger kitchens the number of IF activities also increases. In bigger living-rooms the number of IF activities increases and the number of IF activities decreases. In the second biggest room, which is usually the parents' room, the number of activities does not depend on the room size. In the case of the third biggest room (often the children's room) a positive correlation between, both, IF and SS activities and the size of the room can be observed. When the 4th rooms are ranged according to their size as follows: average, big, small, the number of SS activities there decreases and the number of IF activities increases.

A greater number of IF activities in a room is characteristic of small flats. In the case of a greater number of family members there are more IF activities that are performed in the living-room and in a common room for several children. Therefore, rooms must be distributed so that several IF activities can be performed there (the problem of isolation). SS activities occupy usually the whole room or "force" IF activities out of that room. Therefore, when many SS activities are performed in a room, a "timetable" for using this room must be well co-ordinated.

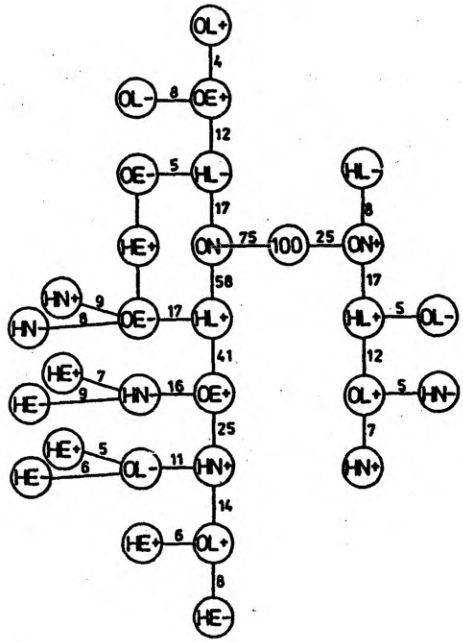
There may be spatial problems in living-rooms where two tendencies are competing - the tendency to place the furniture as in a "spectators' hall", facing the TV-set, and the tendency to place the furniture so that it is centered around a table.

Connecting the data about the IF and SS use of rooms, V.A. Ovsyannikov (1985) derived 7 socio-functinal types of flats (with several layout variants) that are meant for families with different compositions to use.

One of the results of the third research project deals with the interrelations of families' activities inside and outside home. We present data about the distribution of families according to their activities in relation to services to cater for their everyday

needs(N), spending their leisure time (L) and eating (E). These activities may take place frequently (+) or seldom (-), at home (H) or outside home (O) (see Figure 2).

Figure 2
The distribution of families on the basis of activities performed at home and outside home (in %). H - at home; O - outside home; + - frequently; - - seldom; N - everyday needs; L - leisure; E - eating.



The greatest differences among families living in new residential areas is in catering for their everyday needs outside home. Only 25% of families use services intensively, 75% use services seldom. The second greatest difference is in spending leisure time. Most families (58%+17%) spend their leisure time at home quite often, a smaller part (17%+8%) do it seldom. The third difference is in the frequency of eating and spending leisure time at home. Both activities occur frequently and seldom with equal frequency.

The study shows that the number of activities performed outside home is greater (compared to domestic activities) in the Ukrainian and Baltic cities, average in Russian and small in the cities of the southern republics of the Soviet Union.

Only the spending of leisure time is significantly correlated to apartment conditions (the number of family members and the number of rooms in a flat). Leisure time is more seldom spent in smaller flats. Other activities depend partly on the quality of services but to a greater extent on the established way of life of the family.

THE SOCIAL PERSPECTIVES OF MASS HOUSING CONSTRUCTION

Recently, much attention has been payed to social effectiveness of dwellings. For example, Kartashova (Rubanenko, Kartashova, 1982) brings out the following criteria for social effectiveness of dwellings:

(1) the health conditions and the capability for work of the population,

(2) the birthrate and the durability of family ties,

(3) the improvement of the structure of leisure time activities and

(4) the rise in people's qualifications and cultural activities.

Proceeding from our research we have also worked out a conception of a dwelling's social effectiveness. This conception consists of three groups of parameters: factors causing the effectiveness, spheres where this effectiveness appears and parameters of the effectiveness itself. We give a brief summary of these parameters.

Factors causing effectiveness:

(1) mass housing construction - has made it possible for many families to improve their living conditions,

(2) the different number of rooms in a flat and the demographic policy of distributing flats - so that a certain standard level of living conditions is being formed,

(3) size of flats and size of separate rooms,

(4) the home conception of housing construction - a recreational home with passive activity or a home with active productive activity,

(5) inertness-mobility of the housing construction - how quickly is it possible to change, if necessary, the production of dwellings and flats,

(6) the height of dwellings, living on higher floors,

(7) the number of people who share communal territories (stairways, vestibules, houses, common rooms in houses, territory surrounding the dwelling),

(8) the openness or closedness to strangers of jointly used territories,

(9) the level of multifunctionality of flats, communal rooms and territories,

(10) the functional variety of flats or the possibility of transforming them (in a technical sense) or jointly used rooms and territories and the possibility of inhabitants choosing or transforming their environment,

(11) uniformity - variety of flats, dwellings, communal territories and exteriors of dwellings,

(12) the form of possession of flats (private, co-operative, state flat or flat provided by enterprise, office, etc. for its employees), the social policy of distributing flats the price of flats or the rent (high or low),

(13) the suitability of living conditions for regional-cultural peculiarities of way of life and the level of urbanisation,

(14) the distance of dwellings (home) from nature and the possibilities for reaching it,

(15) the existence of shops, service enterprises, schools and cultural establishments and the quality of work in the residential area,

(16) the distance of places of work from home, as well as distance of shops, service enterprises and cultural establishments in the city.

Spheres where effect becomes apparent:

(a) spheres of location

(1) home
(2) vicinity of home, residential area
(3) city; trading, service and cultural centres
(4) connected with place of work, near place of work
(5) place of work

(b) spheres of activities

(1) productive activities
(2) consumption of culture
(3) communication, group (also family) activities
(4) catering for everyday needs
(5) bringing up children (socialising children)
(6) biological reproduction (bithrate, health, recreation).

Parameters of effect

(1) Results of activity (the extent, frequency and quality of activity)
(2) Quality of social relations (the level of formality, the character of informal relations - good or bad relations with other people, readiness for co-operation, etc.)
(3) the level and direction of social activity (wish to begin new co-operative actions, negative or positive social character of these actions)
(4) the level and direction of environmental activity (to what extent a person takes part in activities for changing their environment, negative or positive forms of this activity - whether a person damages or builds)

(5) the level of variety of activity forms (greater or smaller unpredictability of way of life in population)
(6) the level of concentration of people (spatial and organisational concentration)
(7) the durability of forms of activity (durability of way of life, activity groups and place of action)
(8) expenditure in other spheres to compensate for the unsuitability living environment
(9) people's satisfaction with their way of life
(10) people's orientation to certain spheres of activity and location.

Effect resulting from planning of the living environment should be considered negative if it brings about the decrease in the results of activities, further formalisation of social relations or decrease in inhabitants preparedness for co-operation. The effect should be considered negative also when it causes decrease in positive social or environmental activity or when positive social activity changes into negative social activity, when it causes decrease in the lvel of concentration in spatial (urbanisation, large residential areas or large dwellings) or in organisational (too large enterprises, kindergartens, etc.) sense. The efect is negative when it causes decrease in duration of way of life and activity groups, increase of compensational expenditure, decrease of satisfaction and narrowing of the range of these activities and location towards which people were orientated.

Positive effect here is not connected with the increase in the quantity or adaptation of the corresponding factors. It is connected with reaching a certain optimal level.

It was not the aim of the present article to present theoretical conceptions of environmental psychology (our articles dealing with these conceptions have been published in previous collections - Niit, Kruusvall, Heidmets, 1981; Niit, Heidmets, Kruusvall, 1986). Neither was our aim to present a systematic survey of psychological research connected with dwelling and home. We wanted to present methods of interviewing, data processing and analysis and graphic results that have been used in concrete researchers dealing with problems of the residential environment.

The Soviet Union is on the threshold of great social, economic and cultural changes. New directions are being prepared also in housing construction and the service system. Many obstacles and inertness in design and industrial production must be overcome. The concrete results of socio-psychological research must be taken into account in the actual use of dwellings and residential areas so that the future residential environment would not only be economical and comfortable, but also humane and improving for people.

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X ENVIRONMENTAL SUBJECTIVITY OF SOCIAL LIFE. J. KRUUSVALL. ENVIRONMENTAL CONDITIONS FOR COMMUNITY DEVELOPMENT. Ed. by T. Niit, M. Raudsepp & M. Heidmets. Tallinn: Tallinn Pedagogical Institute, 1989, pp.7-25 (in Russian). Abstract.

ENVIRONMENTAL SUBJECTIVITY OF SOCIAL LIFE

J. Kruusvall

ABSYTRACT

1. The objectivity of social subjectivity. Societies with comparable levels of production have followed different paths of development, e.g. Western democracies and Fascism-Stalinism. This is, on one hand, socially subjective, but on the other hand, an objective feature in the life of society. While the prevailing mode of production determines the qualitative features of the society, the social subjectivity is an inner quality of the society which can be characterized by different quantitative parameters to determine the "level" of subjectiveness, the "volume" of expenditures, etc.

2. The subjectness and subjectivity of social relations. The primary subjectness in society emerges when certain objective relations - activity of people, social stimulation, needed means of activity, and a fixed freedom of activity - exist in the society. The activity of each social subject is always subjective, resulting from the state of consciousness, individual needs and the influence of other subjects. The subjectness of a metasubject (or the whole society) can be understood as a ratio of primary subjects and the whole population, and its subjectivity - as the potential possibility of transforming the decision of any social subject into objective social inevitability to other subjects. The subjectness and the subjectivity of a society are inversely related. The development of large social systems (like the state) is always more subjective (and usually more disastrous due to the economic potential), since their subjectness is lower than the subjectness of small social systems.

3. The environment as a social message. Feeling the increasing external determination in their activity relations with the environment, people looked for the reasons of this predetermination in their environment, among the things. The ideas of objective self-activity of some material substance or ideal supersubject (absolute idea, gods) emerged. As a supersubject does not have any humane goals, we have to deal with the personification of the subjectivity of society. The society and not the environment has created the barriers throughout history, the overcoming of which has turned humans into human beings. The society has emerged due to the limited capacity of human information processing, and people can function only under definite human relations. As the information processing capacity of the society is even more limited, the human-made environment becomes increasingly a purely social message about the manifestation of the society.

XI MAN AND ENVIRONMENT UNDER THE INFLUENCE OF SOCIAL FORCES. J. KRUUSVALL. ENVIRONMENT AND SOCIAL DEVELOPMENT. (Proceedings of the East-West Colloquium in Environmental Psychology). Ed. by T. Niit, M. Raudsepp & K. Liik. Tallinn: Tallinn Pedagogical Institute, 1991, pp.9-16.

MAN AND ENVIRONMENT UNDER THE INFLUENCE OF SOCIAL FORCES

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ABSTRACT

The article deals with the social force which affects the relations between man and environment as an independent reality, arising from the strive of human beings for mutual decrease of the indefiniteness of behavior. Reproduction of the organizational structure of any society which functions under the influence of the social force assumes the additional engagement of people by any kinds of social activities. The historical mechanisms of the additional engagement of people are described. A subject is the carrier of indefiniteness in the social environment and subjectness is ascribed to him/her by the society. Reproduction of subjectness is an important element in the process of the self-regulation of society. When the quantity of subjects decreases, then the social force of the society decreases also (the social structure begins to disintegrate) and subjectivity (i.e. inadequacy) of the leadership is going to increase. Due to its quantitative attributes the social force is applicable for solving humane social problems as well.

The ability of reflection is considered if not as a feature that distinguishes man from animals then at least as one of the main attributes of human cognition. Both at the level of common sense and at the level of scientific reflection our world image is similar: man is opposed to environment or some part of it (I and the world, man and thing, subject and object, purpose and means, idea and substance). The theories that interpret behavior or activity can generally be divided into person-centered or idea-centered ones (departing from the man's biological or psychological attributes, his desires and volition, inevitable realization of a particular idea etc.) and environmental-deterministic ones (materialism, ecological determinism, cultural anthropology etc.). If in the first case one advances to subjects of higher levels above the individual (group, nationality, social class etc.), then these subjects still maintain their own personified "face" (group interests, own mission). And when the marxists or cultural anthropologists admit the existence of social influence upon man via the material environment, then only the reproduction of certain economic relations or of a particular culture are supposed. In my works published during the last decade (see Kruusvall, 1983 a,b,1986; Niit, Kruusvall, Heidmets,1987) I have come to the conclusion that the influence of social environment on human behavior is not limited to only attaining a certain social or environmental quality. Below I shall try to describe theoretically the social determination of activity as a so called third force, which must be taken into account in order to understand the relation between man and environment.

All the living beings have an essential common feature - the capacity of the information channels connecting them with the external environment and the information processing capacity of their nervous system are both limited. Therefore the organisms cannot function in the conditions where the indefiniteness of the environment (regarding its vitally important parameters) is too great. One of the main purposes of any living being's life activity and behavior is to bring one's environment into a more definite state, to diminish one's dependence on the environment. Living beings choose their environment (selectivity of perception and spatial relocation), adapt to their environmental conditions, transform their environment by means of their behavior and its products. Occupation and control of a territory, superseding other species or other individuals of one's own species (environmental psychology has dealt with these phenomena in the human society) represent actually an active way of decreasing the indefiniteness of the environment. Generally speaking - each interaction between individuals is always a process of mutual determination. Characteristic to humans as a species is the fact that as the other living beings can only set limits to the life activities of others on a given territory, then humans can coerce their fellows to do something or to behave in a certain way. In doing so not the content of activity/behavior (as a rule it may be of any kind), but the fact that it excludes some other, unpredictable activity or behavior, is essential. We may call such an

engagement of another person by a certain (active or passive) activity or behavior, which excludes the other potential activities or modes of behavior in that person, the process of pre-determination. If all the members of a group try to pre-determine one another, then the undefiniteness of interpersonal relations in this group does not diminish, but increases. A chaos-like state comes into being which (being intolerable for individuals) is a good base for the emergence of a certain structure or organization of relations, the function of which is to pre-define all the members of the group outside their interpersonal relations (i.e. objectively). Subsequent stability of such an organization is reinforced by fear of the possible revival of chaos. It can be assumed that it is the way the human societies have once emerged and how they are emerging again and again.

If we return in our minds to the beginning of the history, then any more or less logical analysis must prove to anyone that the Darwin's theory of evolution, the marxist-materialist theories of labor and the idealistic-religious interpretations are groundless for explaining the emergence of human society and the man himself. Rather the recently advanced theories of chaos (I. Prigogine et al.) which deal with the self-emergence of structures from chaos could be accepted as a model. So, for some reasons some chaos of relations had to emerge in the hordes of the man's ancestors. As B. Porshnev (Поршнев, 1974) has shown, our ancestors apparently began to use the capability of biologically inadequate, the so called neutral behavior, to evoke the imitation of it by other individuals in order to inhibit some undesirable (threatening) behavior in them (by replacing it by the imitated one). According to Porshnev, such interdiction was the base for the emergence of direct suggestion - evoking different activities in other individuals. If his reasonings are correct then we are dealing with mutual pre-determination which unavoidably had to increase general indefiniteness. Porshnev argues that first the pre-humans reacted to such chaos with flight from each other that led to their spread over the whole planet. At the same time, by trying to adapt themselves to different natural conditions, pre-humans discovered the effect of joint activity and began to use division of labor. But only when they began to use division of labor as a structure meant for organizing their interpersonal relations, the human ancestors could associate into stable groups again. The division of labor, giving each individual a generally accepted role, abolishes the necessity of permanent mutual pre-determination (suggestion). Thus, having acquired the indispensable function of keeping together and organizing human society, the division of labor cannot disappear, cease to exist. But the division of labor cannot exist without labor itself, nobody can be defined without activity - so the search for work and activity became the main cares of mankind. In order to solve this problem any society employs all of its mental (science, culture, religion) and material (production, economy) potential. At the same time a society is characterized by an invariability of activities (a social system may function on the basis of any human activity) and personal invariability (it is unessential which individuals perform the social roles - people can be

substituted, exterminated etc.). Therefore a social system can survive longer than any nation or a culture. Actually, social revolutions do not give rise to any new societies, only the form of social organization is changed.

Let us consider some historical social mechanisms that are used for the additional engagement of people by socially approved activities.

1. In the traditional cultures primarily a certain socio-cultural mechanism which hinders the development of means of production is used (primitive level of production engages people with more work).

2. Engaging people with irrational social activities (religious ceremonies, building objects of cult - pyramids, temples, military service etc.).

3. Direct restriction of freedom of activity (keeping people in prisons, unemployment, famine etc.).

4. Total or partial destruction of products (making sacrifices, prohibitions and taboos, conscious religious renunciation, destructions in wars, negligent and unfunctional usage, low-grade and unproductive work arrangement).

5. All forms of exploiting of man by another man (additional engagement for producing surplus value).

6. Objectification of labor, accumulation of labor in the form of capital.

7. Active generation of artificial consumption needs (advertising, fashion etc.).

8. Functional urbanization which does not decrease but increases the communicative engagement of people (communication, transport etc.).

9. Mass communication (TV, radio, printing-press) as a transmitter of seemingly definite world image.

10. Kindergartens and schools perform also a function of engagement, being often the places for "putting aside" the children rather than being educational institutions.

All the above mentioned (and the other analogous) mechanisms have an objective effect on a man, they are enforced on him by the social environment. But it does not mean that these phenomena are absolutely objective, inevitable or vitally important for people. A social organism could be reproduced (due to its behavioral invariability) on the basis of a much more humane activity without distorting the environment. Thus the social environment is an independent reality which does not emerge on the basis of the organization of interpersonal communication (cooperation, division of labor, economic relations etc.) but manifests itself through these phenomena. Unlike the other kinds of environments the social environment

is an active environment that has social force - i.e. the force which regulates the activities of the individuals and which emerges from their strive for mutual interpersonal definition.

The self-regulational existence of a social system presumes also the reproduction of the interpersonal indefiniteness itself, because only the apprehension of the danger of chaos makes people to subordinate to the effects of the social force. The carrier of uncertainty (the region of the increase of indefiniteness) in a social environment could be called a social subject. Such subjectness is a potential, not an actual (realized) attribute, it manifests itself in the degrees of freedom. If one of the concrete variants of activity is realized, then the subjectness of this particular social "region" decreases - it is the process of desubjectification. Frequently fellow-men learn about former abilities of some person only when these have already vanished (e.g. a tardy "discovery" of a talented artist). We cannot consider such a person a subject afterwards because subjectness is not actually his quality but a quality of the social environment - the others distinguish these distinctive attributes among which the degrees of freedom of a subject are taken into account. Thus, social subjectness does not presuppose always either actual activeness or the existence of any of the "indefinite" properties (subjectness may be ascribed by the environment). But on the other hand, a genuine activity potential may remain unnoticed by the surrounding people (often they even do not want to notice it because it is one of the ways for reducing indefiniteness) - and a subject will not come into being. The qualities described above enable to increase the perceived danger of indefiniteness with the help of two kinds of pseudo-subjects:

1) ascribed subjectness - creating a cult of super-subjects (gods, idols, great leaders, the party etc.) and an image of a strong enemy (some other nation, state, economic system, particular person);

2) performed subjectness - demonstrating one's indefiniteness as seemingly greater than it actually is (e.g. displaying the Reagan's "star wars" program to the Soviet Union or displaying the "unpredictable results" of the possible disintegration of the Soviet Union to the West).

The function of the reproduction of real indefiniteness and subjectness belongs to a process which on the first sight might be considered as destructive towards the social environment - i.e. the development of means of production and the subsequent redistribution of activity potential. Indeed, the scientific and technical progress is asocial first, because it reduces the number of places of employment (machinery substitutes men), secondly, as it often gives an activity potential to people who have not appropriate social "merits" (in the history it is accompanied by revolutions - e.g. transition from feudalism to capitalism). At the same time we experience as the truth that the scientific and technological advancement is accelerating and it is the social

force that is acting as its inciter. The fact is that in the world where the possibilities to operate with the creation of pseudo-subjects are reduced, the scientific and technological progress is becoming the main agent of reproduction of the necessary indefiniteness. Namely the progress in this sphere subjectificates production, stimulates competition between firms and states - offers jobs and activities for the day-to-day renewal of the whole society. Naturally there are other social subjects in a society - as political parties, bodies of people's representatives, and different associations the level of subjectness of which may be very different depending on how they have subjugated themselves to the determination by the social environment. In case of desubjectification powerful subject gives rise to changes in the social environment (a certain social footprint is left after him), but a less powerful one is destroyed himself, at the same time strengthening the existing social system.

Each process of desubjectification, enforced social decrease of the subject's indefiniteness brings about some loss of useful information (the unrealized possibilities of action). A talented artist is forced to produce only such works of art that can be sold (and their price is determined by the attributes which have gained popularity absolutely arbitrarily, the main motive is to invest money in the works of art). A preliminary good project of a communal building may be transformed beyond recognition after different departments have cut "something" off (just in order to justify their social existence). Thus we can say that a social organism "feeds" on human information, the more subjects it destroys by determining them, the more strong it becomes itself and the less useful information is left. In other words, the less is the quantity of subjects in a society, the more arbitrary are the action variants by which the remaining subjects are defined and the more optional is the direction of development of the whole society. The probability that the subjective plans of any social subject become the objective direction of social development, may be called the <u>social subjectivity</u> of a society. As social subjectivity increases when the number of different subjects decreases, we may decrease subjectivity by increasing the number of subjects in a society. Great totalitarian empires choose, as a rule, some subjective, inadequate routes of development and perish as a result. To prevent the possible chaos, an empire has to disintegrate in time into small states of optimal size which start to interact as separate subjects.

The dynamics of the <u>social force</u> is contrary to that of subjectivity: it is stronger in the societies with many subjects (because we can find more indefiniteness there and the social force emerges as a reaction to that) and it is weaker in the mono-subjected societies. Thus, in the totalitarian empires the possible inadequate direction of development may be accompanied by disintegration of social structure (because the social force which reproduces it is diminishing). Disintegration begins on the lower levels of the social structure (social hierarchy, distribution of labor and roles etc. become ambiguous), but the reproduced

indefiniteness is still too weak for evoking the social force. In the phase of disintegration the society exerts the most powerful influence on the environment. As it was mentioned above, by this time the society has "gorged" the majority of the necessary information, production begins mainly to copy the environment. Before disintegration, in the majority of empires pompous pyramids, fortress walls or residential districts consisting of monotonous "barrack" houses have been built. In most cases such a seemingly safe environment cannot rescue the state from internal decay or from becoming a victim of an external enemy. (See the more detailed discussion on the developmental stages of societies from the standpoint of informational processes in Kruusvall,1986).

The above discussed social force is a quantitative force as it lacks both human or environmental qualities (it may be realized by any kinds of environmental activities). In case of the absence of human leadership or human-centered culture, the society becomes an organism parazitizing on its human population which often chooses a destructive subjective route of development. But due to the invariability of activity, the social force is also applicable in the service of mankind (e.g. imagine a social order where the ecological goals are highly valued). Unfortunately this force can be directed only by quantitative means (the number of subjects, the number of degrees of freedom of these subjects, etc.), and it is very difficult to separate it (both cognitively and in reality) from the established quality (the culture) in the society which has emerged on the subjective basis. Realization of the real existence of the social force would likely be useful both in the designing of society and environment.

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