

KEYNOTE ADDRESS

THE HUMAN DIMENSION OF ENVIRONMENT: TIME AND SPACE IN THE MOBILITY OF FAMILIES

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For 1000 years mankind has aimed at transforming the natural environment, *as far as necessary*, into an artificial one. Over a long period of time this process took place within the boundaries of human abilities. However, since we have arrived at an effective use of technical methods and technological tools, the conditions of the man made environment are changing faster and faster. Today the natural environment is being exploited *as far as possible* and thereby destroyed, in order to receive a maximum of profit by a minimum of effort.

Many families are losing their roots and with them society may and will lose its roots too. Today we become more and more aware that this way has no future. Under these circumstances it is necessary not only to analyze the situation but also to develop new goals and measures on the basis of carefully controlled research results.

In this context the family plays a more and more important role. We have to ask ourselves: does the erosion of the basis of our life go hand in hand with the erosion of family structures in the world? We have to become aware that families are not independent from the environmental conditions. The environment can support the life of a family but it can also make family-life more difficult or even destroy it.

Some technical developments of the past seemed to bring advantages for the family. Now we have to perceive, that the system effects of technology are apt to erode family structures worldwide.

Our Concepts of Family

By common definition families usually are thought of as groups of parents and children living together. But is this the whole of the family? This definition is the typical result of the prevailing kind of thinking, which is formed by modern natural science and technology. This kind of thinking divides parts of a system into its elements and subelements in

the hope to understand it better. We know however, that a system is always much more than the sum of its elements. This may be one of the reasons why the role of the family is not understood well by the decision-makers in the fields of policy, technology and economy. However, if we do not well understand the social functions of families, we cannot take care of their needs in a proper way.

A family is, first of all, a part of a network in space and time within the network of our society. Its time dimension covers at least three generations - nowadays usually more of them - and has to do, i.a., with the transfer of information from one generation to the next one. To a certain extent the flow of experiences and of some information takes place along the line of these three generations. Family therefore is the connecting link between the past and the future. Having the future in mind from a family standpoint, means being responsible for healthy conditions of future life, also of social life. If the environment is destroyed the hope for the future is lost.

There are also effects of the family on the environment (as well as on society). Elements that have a long life are always stabilizing factors. However, the fast and uncontrolled development of certain technologies includes the risk of overriding the stabilizing factors. Thus there may be an upsetting of not just the environment but also of the social system. We see these effects in the increasing gap between the economic conditions of the poor so-called 'underdeveloped countries' and the rich so-called 'developed countries'. And we can see the erosion of family structures in the so-called first world, with the increasing numbers of single-person households - in some city centers we find a concentration of up to 60% of such households. In comparison to families they are isolated elements. We have reasons to believe, that some of our technological developments and the policies which adopt them without questioning their effects on social systems, are undermining family structures directly, or indirectly by changing the environment.

Environment as a Space for Human Mobility

If we look at the patterns of the daily small-scale mobility of a family, we usually find a dense network of short distances in the vicinity of the homes, which may be covered at low speed. These ways are taken by children, mothers and older family members. To ensure this mobility of a family, the environment has to fulfill certain conditions: it has to be

safe, it should not threaten your health, and it must bring opportunities for social contacts.

Where do social contacts outside the home take place?

At the first instance, at places of work. However, working places are more and more organized for optimal communication between man and machines. If we look at a computer organized office, people are perfectly trained to communicate with computers, and not among themselves. Not just physical work, but also work with one's mind isolates people from each other. Formerly, working places had been family-oriented, or were designed to integrate social contacts in a way which resembled family-contacts. Today's working places usually provide no opportunities for these kinds of contacts, and pay little or no attention to the connection with families. Rather, they are oriented towards the optimal profit of companies and not towards society as a whole. The result is that people have to concentrate on isolated tasks and become separated from each other, and sometimes insulated.

A second possibility for having social contacts is shopping. Retail-shops are the ideal places for informal contacts. But where are they now? We usually shop in anonymous shopping centres, where we pick up food as man did in the age of hunters and collectors, with the difference however, that people in the shopping centres are proceeding in isolation and not embedded in social groups as the people in the early stone age had been.

A third opportunity for social contacts is public space or semi-public space. Let us look at our buildings, e.g. at the corridors: for economic reasons they are built so narrow that you cannot have convenient social contacts there because of lack of space. For having social contacts it is necessary to have enough space so that you can keep your intimate freedom around your body. The same problem is to be found also in the public transport system, or in elevators - the latter are inhuman boxes for maximum transport capacity and speed.

Thus we see that the usual environment of our settlements is ill suited to meet the basic needs of small-scale mobility required by the normal life of families. In our highly motorized countries there is only space left on the sidewalks, and sometimes not even there. The main part of the public space - which was formerly a space for social contacts - is now being used as a race-track, which is a kind of death zone for the non-motorized, and as a storage space for car parking. Family-life has to take place inside the individual homes, which are isolated like islands, or in strictly organized places like parks, which are again surrounded by

race-tracks. In order to get there you have to cross the sea of exhaust fumes and noise produced by machines. In our cities and towns the space for formal social networking has been physically destroyed. Thus we may say, that our society does not take care of the needs of the family in a real way.

Speed and the Time-Dimension

Our possibility for moving at high speed has eased and seemingly confirmed the development to separate working places, shopping centers and recreation areas by large distances from the places where families actually live.

More and more parents spend long hours of the day away from their children by help of technical transport modes, for so-called economic reasons. The concentration of working places away from the homes has the effect of longer and longer trips for those employed in out-of-home work - which means more and more separation from their families. A great part of the family budget is used today for keeping this traffic system alive. It has the effect that all people are moving faster and faster, without saving any second of time.

The belief that we can save time by increasing speed is erroneous. It is true for one single trip only; it is absolute nonsense when regarded in a system-approach. Our research has proved, that the average travel time keeps constant, independent of the travel speed.

We are built in such a way, that we have to use a certain amount of time for our movements, no matter as to the speed of our movements. Therefore we cannot save time by increasing our speed. We use a system for our movements - and the effects of this are that we extend the space, but do not save time. It is impossible for man, by individual movement, to save time by an increase of speed. The human environment is such, that the only appropriate speed is the pedestrian speed.

Also, our ability of becoming aware of our environment is not multiplied as such by an increase in speed. If we move through Austria as pedestrians, we get many impressions of the country and its beauties. But if we drive through this country with a speed of 120 km/h, our perception of the same country is shrinking to a size forty times smaller, and the dominant impression is an environment of asphalt, concrete and noise. Of course, roads are important for certain goals, especially to control a country easily; this already the Romans knew, who succeeded

in controlling their empire by building roads as the fastest means of transportation of their time.

Thus, by increasing speed we change the system in which we are moving, and we change the scale of our perception. This, again, has effects on the way we are living together. Our dimensions change.

The rather firmly rooted belief that we can save time by increasing our speed, is connected with the adoption of a thinking prevalent in worldwide strategies of economy, which leaves behind the human scale. The idea there is: the larger the scale and the more intensive the concentration, the cheaper will be the products and the better you can control the market.

Our families have become dependent on engine-powered transportation systems. Since it is much easier to move as a single person in such an environment, this kind of environment is not supporting families. Whatever way you take it, the family is a group of human beings, who have the need to communicate with others, including their relatives. The former corporate identity of a family with their relatives, with all its positive and negative traits, has been replaced by corporate identities of and for companies. This warm and necessary emotion for the stability of our society is exploited, for economic reasons, sometimes at the price of the destruction of families.

It may be little known, that pedestrians carry more goods out of shops than cardrivers do. Only 70 - 75% of the pedestrians are carrying nothing, however 80% of the cardrivers do not transport anything.

We accept this kind of environment without much criticism, but it gives expression to our value-system: the space reserved for cars is by far larger than the space of playgrounds for children. We are slaves of the shopping centres. Our main interest seems to be able to drive out of a place - and the kind of architecture we have, looks accordingly. However, if a place is pedestrianized, you see families walking around together, you can see the flow of generations. It is mostly the singles who drive.

A human being is a two-legger, walking in an upright position. In the so-called developed countries, the environment has become inhuman within a few decades, as it has been transformed into a machine-oriented one. Developing countries are on the way to move into the same direction, with the same terrible effects on the family structures also.

If we want to prevent these adverse effects on families, it is necessary to keep in mind, that in the first period of individual vehicle mobility, cars

have had positive effects. This is no longer so in its further development. Now the stable element "*family*" has to carry the burden, and has to cope with the effects of this technically oriented environment. However, its stability has limits, beyond which we are moving nowadays.

Only a Pedestrianized Environment is Human

In the city of Villach it has been observed that after the introduction of extended pedestrian zones in the city center, young families tried to move back to the center, since they became aware of the high quality of life for them. Their children have a safe and healthy environment again, they can meet each other, shopping and working can take place near to living areas. The cars are stored outside of this area.

This does not mean we have to fight against cars; it means rather that we have to give people the choice of options between different ways of living. Mostly it means bringing opportunities for work into places which are under the control of the people, and not of the traffic system.

We have studied very intensively the acceptance of walk-ways by people. With increasing distance, and if the environment is car-oriented, people dislike to accept having to walk. But if the environment is car-free, people accept longer walking distances at a rate of 70%, even in the city of Vienna.

However, the usual strategy is the following: cars are permitted to be stored near the homes, near the shops, near the working places, in nearby garages. At the same time you recommend to use the public transport system - but the bus-stop is far away. Of course this is a perfect trap to induce people to take their cars, and every normal person does take it. If you make an arrangement like this in an experiment with animals, it would be called, at the least, 'creating an inappropriate bias'. If you make it for people, it is called policy.

For providing equitable options for people as to their mode of moving around, it would be imperative to clean the surface from cars, or to store them at least at the same distance you have to walk to the public transport stops.

If you really provide space for walking, you would restore a lot of opportunities for social contacts, you would meet all the other people walking around; the working places would come back to the vicinity of the areas where people live. You would keep time around the homes; shops would be coming back and you would get control over your environment.

Conclusion: An Environment with a Human Orientation Means Human Speed

Human speed is the speed of the small child, it is the speed of the adult man or women and it is also the speed of ageing people. It is an absolute illusion to believe that you can create an environment with a human orientation in a car-oriented society. This illusion also touches upon the question of our values. In many countries we have lost human values and have replaced them by values which are dictated by engines.

Family means future, and this future means a future for man.

Goals of a policy for families must take care of an environment for families: playgrounds instead of parking lots; clean air instead of polluted one; trees and green areas for playgrounds for children instead of concrete; beauty of housing and cities instead of uniform blocks with facades just to self-satisfy architects; variety instead of uniformity; small shops providing personal contacts instead of shopping centers distributing goods and collecting money.

The values inherent in family policies must be long-term values: in order to be effective they have to be environmentally oriented values, because man has to be part of the environment, not the machine.

The traffic system of our days is one of the tools for making the rich still richer and the poor still poorer. This is true for continents, countries, cities. Families suffer from it, because the uncontrolled use of high physical speed is a common cause for the segregation of its members, with mass migrations every morning and evening, every weekend and during the so called holidays.

A family oriented environment has to keep the family members together with a maximum of individual mobility. This can only be reached in a pedestrianized environment. This does not mean that your cars would be taken away from you, in the contrary, you could keep them. But we have to learn to control the car and the system it is bringing with it, instead of being controlled by the car and its system. It would create an environment for families in an ideal way, with far less risks for children and older people, and a sound social environment, which we are going to need in a Brave New World!