HOUSING

by

Norbert Pintsch

There is nothing, which has not already been thought and considered and about which not at least once been written somewhere. New to us appear however the interrelations, in which the already known but apparently forgotten knowledge from earlier times is discussed in new light. The open, dynamic systems of the 70s of the last century have been subject to models describing and explaining these concepts. This collection of 12 articles is based upon these concepts and they have been published mostly in the magazine TECHNO-BIZ between 2006 and 2011 and discuss different aspects of HOUSING. They have however been edited by the publishers and may vary from the original work, including the drawings and illustrations, which may not always correspond to the submitted material. Changes in the written article itself have however been avoided.

INSTEAD OF

... it is a long time ago, that the famous architect Frey Otto, expressed his opinion as supervisor for a doctoral candidate regarding the size of a doctoral thesis: If it is more than 40 pages, it is worthless...Others, who followed in similar capacity complained about the foot notes and the remarks as well as literature listing, considering it an effort to prove the scientific work and detailed study of the topic, but which often consumed even more space in the research work than the content itself. Holders of this opinion should be satisfied with the work done here!

The author would like to express his gratitude to the colleagues and friends over the years, who have been helpful and influencing my work, sometimes unknowingly, by showing patience and criticism about different topics. In Germany K-P. Fritz, J.Schmitt, P-M. Heckes, KP Friebe, M.Stober; in Iceland Trausti Valson, in ColimbiaE.Perez, in Cameroon M.F.Wankie, in Pakistan Amjad Ali, who made the Pakistan project possible in the first place, as well as Ghayyoor Obaid, Naeem Bawja, Farooq Ahmed, Anees Yaqub, S.A.J. Shirazi, M.S.Shahab,- and, was there not the language talent of Aamir Rafique at my disposal, nothing would have been understandable.
Of the many helping hands, I must specially thank my helper for all times, Muhammad Ilyas, who transported and organized things.

The author: see www.norbert-pintsch.com

AT
Appropriate Technology

IT
Industrial Technology

OT
Organic Technology

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by

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CONTENTS

Technology and Culture

What has technology to do with culture? a question asked by many professional technology fans. A more exact consideration will however reveal, that culture is the larger dimension and technology is just a part of it. In different eras, some areas have been more influencial and in others less. This way of considering things in itself testifies to a technical way of looking at things. Technical way of thinking is characterized by representation in a manner, the roots of which are to be found in mathematical calculations. There, where abstract thought cannot be explained due to missing power of imagination, we make use of drawings in order to achieve clarity in understanding. It probably never happens that a development process runs as a straight line, rather it is more like a chaotic structure in which now and then a certain regularity becomes visible, which is lost once again after a certain period of time to once again appear as a logical pattern at a later time (see illustration 0).

Cycles and developments are gladly represented by parabolic curves. Either something develops itself to a climax to later on once again fall to a flat level or a tendency is shown for something to rise and sink (see illustration 1).

This form of diagram often gives the impression of a continuous process of development in a wave form. A break from this cycle is displeasing. And still, recognizing a break in pattern, we still arrive at a hyperbolic diagram, which apparently reflects the reality more precisely. It helps us to follow well the development of the economic element of the culture: a "positive" development reaches its climax, to break at a maximum point and fall to the ground. Even in a positive icreasing tendency, the negative image has to be overcome, in order to arrive at a zero line from where to grow into the positive once again (see illustration 2).

The economic impact of virtual money is well recognizable, when we consider it from a mathematical perspective.

Well known from the game theory is the chess model: the persian king allows his boredom to be covered by development of games. The developer of chess pleased the king so much, that he was given one free wish. The developer only wanted 1 corn on the first field, 2 on the second, 4 on the third and so on. The king soon lost his laugh (see formula) because required number of corn were not available any more..

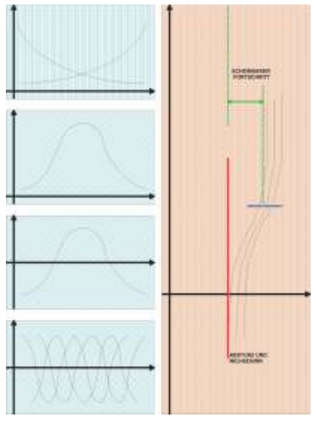
Z = Sum _N=0^N=63(2^N)

"Sum of N=0 till N=63

over 2 times N. As x^0=1, the summation begins with a corn.

The result:

On field 64 there are



9,223,372,036,854,775,808 pieces of corn,

written in a compact way:

9.22E+18 (corn).

The sum of all corns from field 1 till 64 is:

18,446,744,073,709,551,616, written exponentially as 1.84E+19 (corn).

Contrary to chess game, the virtual money economy has unlimited number of fields.

Take the case of Issa. If he had given his son 1 Rupee for investment, after a period of 2000 years and using the interest rate formula, the quantity of total money in circulation today would not suffice to pay him out. Apart from that, Issa would still have an immense transport problem (see calculation).

K_N = K_0 (1.0 + p)**N

N = Number of years (these are all the years from 0 till 2000, i.e. total 2001),

K_N = Capital after N years,

p = Percentage / 100, at 5% means p=0.05.

The result:

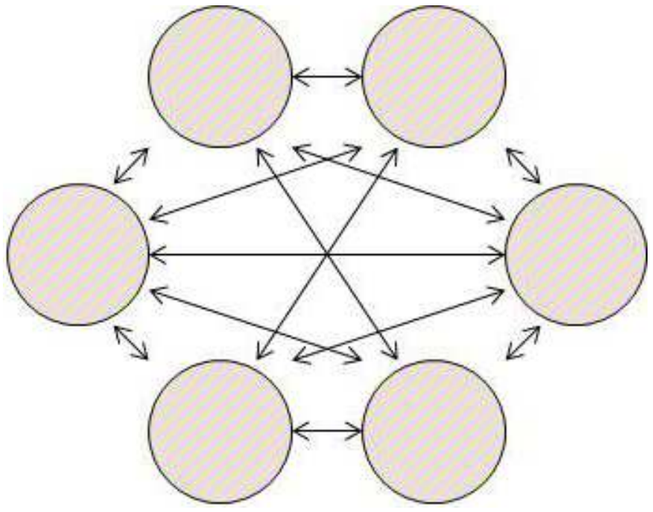
K _ N (N = 2 0 0 1) = 25.106.573.148.442.298.897.434.214.700.000.000.000.000,00 prs,

said differently:

2.51e+40 PKR.

The interest alone in the year 2000 would be:

1.195.551.102.306.776.137.973.057.



843.000.000.000.000,00 PKR, i.e. 1.20e+39 prs.

If paid in 500 PKR note of 1.12gm each, this would be a mass of 5.6224 * 10^34 kg, i.e. 9412079817.9 times the mass of earth.***

Both the examples in respect of the virtual economy confirm the correctness if the hyperbolic diagram (according to KP Friebe****) indicating the necessity of the break-up. The reality confirms the correctness of the assumption. The increase in numbers is so massive, that only break-ups, i.e. the impoverishment of one group of players in real life keeps the process going on. An indication of and outdated system, not repairable any more.

The possibility to represent the social development as described above by way of a formula is therefore understandable and is shown as follows (see Formula with Legend).

C = f {N* + c* [PRE <-> paste] }

C	=	Culture
N*	=	Nature
c*	=	Civilization
P	=	Philosophy
R	=	Religion
E	=	Education
<->	=	Inter-dependencies
p	=	Politics
a	=	Art
s	=	Science
t	=	Technology
e	=	Economy

It is said that a diagram says more than a thousand words. An indication at the same time, how much more can be read out of a diagram.

A diagram is supposed to clarify and simplify. Changes are possible only if we are concious of the volume of simplification, otherwise uniformity remains. Consolation remains the fact however, that even a uniform process will be followed by a large number of people.

***A similar example is described by Douglas Adams in his novel "The restaurant at the end of the universe" / "The hitchhikers guide to the galaxy".

**** KP Friebe is a German cross thinker, who was lately director of a technology foundation in Germany.

***** Culture originates out of the developing nature and the civilization, which is characterized by ideal and material elements and their inter-action. ■■

Norbert Pintsch & GhayyoorObaid

Extreme Housing

A pre-condition for development of future-oriented housing concepts is the capability to be open and to question what is currently available.

Introduction

This long-term project of the IPC has its roots in the beginning of the 60's of the last century, which was characterized by continuously improving technological possibilities and enormous changes in the psychological and social behavior. These refer apart from raising of children, family life and way of cooking, practical methods of production and problems of intimate areas (discontinuation of shower and WC-paper) and clothing (different forms of fashion) also to furnishings and fixtures, which follow different compulsions. Similarly, the designs are more function oriented and therefore differ totally from the traditionally known and usual forms of design.

Development of Housing Concepts

The ruins of tomorrow are being constructed today! The more designed a building, the lesser is its half-value perio4 i.e. its Transcience and modernity! The

projects described here are different from the conventional ones and more similar to structures in other, non-western cultures, for example a classical west-african compound in its design is not positioned on square or rectangular spaces but according to organically formed areas.

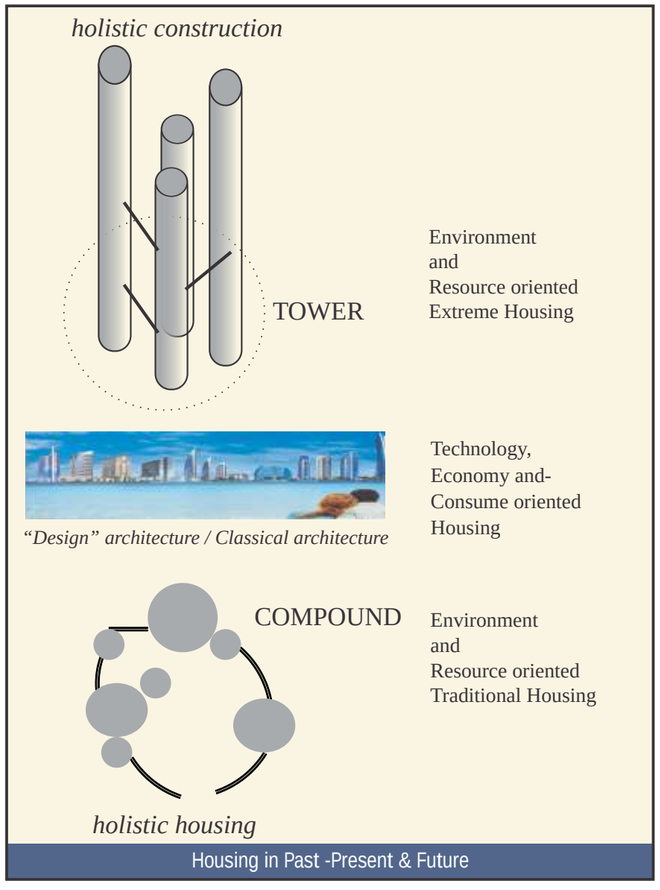
The experiences for the Extreme-Housing, described in the following two projects, are based upon a study of housing concepts in other cultures.The question in these projects is not, whether they are likeable in the present circumstances but rather how one can adjust oneself in a new environment. A precondition for that however is the awareness, how much of the currently available is relevant to the circumstances, which have still to come.

Current wishes and life-styles for forest walks, swimming fun, grill parties, golf, summer festivals etc. do not fit into these project forms because they correspond to conventional urban lifestyles.

A pre-condition for development of future-oriented housing concepts is the capability to be open and to question what is currently available. There is still a long way to go till the general population realizes how to make use of technological advances in the best way.

The project city of Dubai is a good example of the limits of usual way of thinking in such projects: destruction of resources, harm to climate etc. These are the typical characteristics associated with conventionally designed projects, which are flitted with extravagant consumer-oriented installations, but from developmental point of view are just non-plus-ultra of the western standards; one is not gladly ready to accept that the project actually confines the development.

The “Tower-Project” is based upon the experiences of older, non-western cultures and is the answer to the conventional destruction of resources and the general unawareness about the - erroneous development in the western civilization.



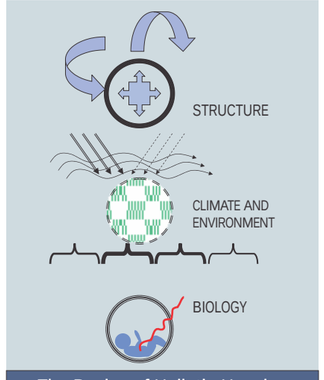
Housing in Past -Present & Future

In the icelandic **“Tube-Project”** the technical capabilities of of local tunnel construction companies is put to use to construct pipes of 10 mtr diameter at a height of 275m in the volcanic region of Basalt.

A unit will consist of two pipes, which are connected to each other through another through another horizontal pipe and a lift which transports which transport people from ground level. .

The imposing structure of the pipes offers a splendid view on the port and the airport, a factor, which influenced the developers comparable to the builders and investors of the Dubai model and which played a decisive role in the decision for this project.

The infrastructure is totally autonomous. The technology of the Savoniusrotors is used on the permanently



The Basics of Holistic Housing

windy platforms of the mountain plateau as well as the rain water, which is collected in containers and used in households, the waste disposal is managed through composting.

“Tower-Project” is based on studies of the 60's of the last century, which have their own history of development in the projects for the “new” humans of the social prognosis. The population development played an important role at that time, which can be seen in context of developments in space travel. Through science and research, a number of assumptions from vague concepts made it into the real.world. Without naming any literature references or research reports, let us confine to naming some key words the changes that have taken place, without referring to problems associated with them.

a.. Reduced Individuality

b..Faeces and Urine collectors for processing

c.. Reduced ownership

d.. Changes in schooling and education

e.. Changes in health related areas

f. Changes in life parts (facilities for certain age groups)

g.. Gene manipulation in the biology (related to humans)

h.. Brain manipulation in

Communication and Information Technology

i.. Integrated production units

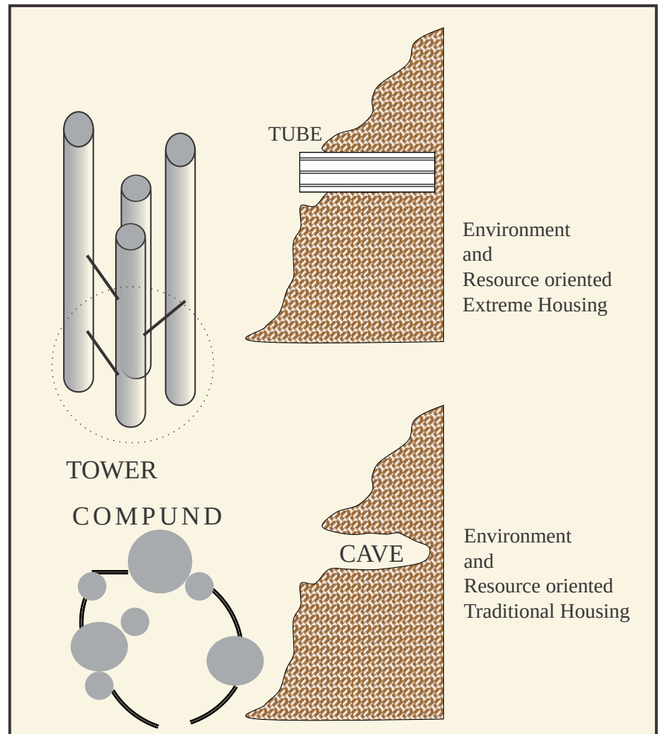
(Termination of separate industrial areas in the economy)

j.. Changes in way of furnishing

(different from classical furnishing)

k.. Changes in cooking methods.

The utopian looking changes may displease, but a look into the present time shows, that these changes are not registered as being unusual and are not seen in context.



Housing in Past & Future

In the icelandic “Tube-Project” the technical capabilities of of local tunnel construction companies is put to use to construct pipes of 10 mtr diameter at a height of 275m in the volcanic region of Basalt

a.. Fast-food und soft-drinks,

b..General uniformity, so-called International Design,

c.. Internet

d..“Harry-Potter” as synonymous for “spiritual” mass product

e.. Gene manipulated foodstuffs

f.. Directed influence on brain functions g.. Madness to remain young

h.. Less employment

i.. Tourism in an unreal world

j.. Loss of religious values and its replacement by consume and event oriented lifestyle

k..Computer aided activities for body, memoiy and sences training

and so on and so forth

Generally it can be established, that thje socalled progress is putting together of temporary solutionsw to the problems: there have been problems whenever humansintelligence. Only in very remote and faraway places is this development no so grave. Development extremists and progressw believers, mostly from urban city culture, refer to it as development emergency!

The “Tower-Project” is based upon the experiences of older, non-western cultures and is the answer to the conventional destruction of resources and the general unawareness about the - erroneous development in the western civilization.

In the beginning it is suggested for suburban areas, the diameter of such complexes is dependent upon the strength of the ground to provide room for 100000 residents, at the same time the project is also a link to the extra-terrestrial world.

It is well known, that each solution in the Greek-western culture causes two new problems. In the 150 or so years since the begin of the industrial era therefore theoretically 300 problems have been created. In the industrialized countries one success of the development is very limited. Free economy destroys resources, Society and Culture! ■■

Dr. Norbert Pintsch

Extreme Housing and Economy

The question is not, what is technologically and scientifically possible, but what is reasonable and sensible from a social point of view.

In the previous article EXTREME HOUSING (Technobiz Dec 2006) already a comparison has been made between the traditional culture, the current situation and the future developments. The global situation require a completely new approach, because the housing of the future, including the necessary construction structures, will not take place at the current level. The biggest brake for the future developments is the economy itself, which is today considered to be a solution for all problems and which is characterized by utopian construction models, which are far apart from the expected changes of the future.

New production locations, increasing infra-structure costs in the suburban areas, increasing unproductive sector, increasing productivity of the individual work place, Limitations created through titles of land and property, the necessity to establish integrated production facilities and so on are indications of the tower structure as described in this contribution.

If we follow the economic-scientific works of current times, we find a clear development of moving the production to those areas where the cost of production is the lowest. Uneconomical entities are closed down, the fusion of entities is a logical result of decisions, because the Market determines the happenings. Thanks to todays communication and information systems, quick decisions can be taken to produce and to market more cost-effectively. Under the term Market one understands all possible things and refrains from defining the same. The Market is supposed to react, and so it will be in future and so it is at present, because sufficient number of theoreticians have engaged with the practical aspects. And that development is taking place in the prescribed manner is absolutely undisputed, because: it is the opinion of all the competent leaders.

Complex happenings are explained with the help of mathematical models. If there were a God of Mathematics, it would probably offer thunder and lightning to quickly clean the theory-pollution taking place !

To verify the assumptions and to compare with the realities. But what if the assumption and the reality are the same? A clear case for correcting, which is however the greatest danger, because exactly the correcting here is the error, which is not recognized. In this way we proceed in a manner, which is wrong but which we assume to be correct.

We refrain in the following examples intentionally to indicate names. Critical reaqders will anyway understand, what and who is meant:

1.Thanks to higher productivity of machines combined with advertising measures, an automobile manufacturer can offer higher quality and larger quantities accordingly with enormous price reductions.

2.Higher mobility requires wider roads, new bridges, infra-strucincome generating measures in order to finance the new investments: hospitals, schools, museums, etc. Are necessary but can also be established privately.

3.Increasing education promotes degree holders, who due to disintegration of the traditional system- look for employment opportunities.

4.Private and government jobs are necessary in order to promote the prosperity.

5.Higher productivity in other countries puts the local markets under pressure, - Jobs are lost as the cost of production is high. At the same time capabilities and talent is lost, as a rule for always.

6.Missing jobs mean falling incomes and lower purchasing power. Higher productivity sinks the prices, increasing uniformity with higher quality enables the prices to be reduced.

Concluding, we allow ourself to refer to a communist leader in XX century, who ,unfortunately, promoted an economic system, which can be seen as a twin brother of the capitalist system. It recommended the theoreticians unlimited field work and other practical work, - historically we speak of the cultural revolution, a measure, which in todays western oriented system could have interesting consequences.! ■■

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NORBERT PINTSCH

Extreme housing in technology, economy & philosophy

The changes and the partly sub-conscious factors of influence take place in current times more and more on a technological level.

We have already discussed and illustrated in parts 1 and 2 Technology and Economy in connection with extreme housing and the following work discusses largely the area of Philosophy and the Religion in order to complete the total picture.

First of all a note on some perhaps surprising aspects of Religion:

1.The basis of thinking of believers as well as non-believers is identical. If non-believers are of the opinion, they are free of religious limitations and think clearly on scientific lines, so this shows actually their incapacity to admit the influence of religion on our way of thinking.

2.One should accept this fact in order to understand the errors in the usual way of thinking, giving a shocking dimension to the usual concepts of finding problem solutions.

3.In western systems, one is inclined in religious matters to make a comparison between bananas and Neem-tree, i.e. one compares, what is actually incomparable, e.g. a religion with a total life system. One can only compare in order to recognize the differences and after that again separate, because the incomparability becomes apparent,- a continuously changing process which should be quite clear.

The deficient knowledge in the totality approach and the appropriate

actions lead to enormous deficits, which are completely covered up in consumption oriented and resource squandering actions. This situation leads to a fascinating situation, which fades away the sense of error.

the correct way would be to move away from the effort to bring order and move towards the reality and then again create a new order. This organizing and re-organizing is a permanent process which should be done deliberately.

In the second case the work process reminds of the sorting efforts of early childhood: everything which doesn't match a toy is put away separately. The development of Extreme Housing does not make such a development unnecessary, rather senseless; this aspect shows the real position of the so-called development.

Loss of knowledge or ignorance, the problems between belief and thinking as well as between thinking and knowledge may be largely seen as intellectual trickery and of absolute uselessness; however they have still not lost their importance. The only thing lost appears to be the importance of the necessity to look into the matter more deeply.

It is not new in the history of mankind to attribute all things improper not on natural factors or their personifications but rather on to an unknown, indescribable single power. One has always tried to focus on a single point even before the start of the civic calendar. If one keeps following this method consequently, the way of thinking internalizes to such an extent, that the

It should not come to war if human beings actually possess the much praised capacity to understand other viewpoints, generally considered as the most important criteria of differentiation between humans and other living beings

In spiritual area, the co-called Knowledge of the Time in the internet is actually misunderstood as knowledge itself, even though experts have called it Pseudo-Knowledge,- the strenuous work of the real search must still be done. In material area, the selection of menu in a fast food restaurant is actually understood as general reality! Especially the field of designing helps towards increased consumption, without questioning usefulness of the products at all.

Especially in technology and research-oriented areas, the increasing exploration attempts are mostly considered in themselves as development.

Illustration 1 shows the various systems ôf the methods in which we proceed:

We try to bring order to chaos and begin to recognize the matter, we try to incorporate the gained knowledge into a pattern, the pattern becomes a reality on which new theories are constructed. In this way the distance to reality keeps getting larger and larger and with that also the quantity of the basic fault, which is to be seen in the context of a fiction-reality comparison.

But the reality is actually different and

Would the system “Life” function like the industrial, research and economic systems, one would need “the whole surface of Asia for an amoeba”!

The understanding of known and above all unknown senses is defeated due to erroneous total understanding and can only be compared with the often quoted

spiritual dullness of the middle ages in Europe.

The enormous discrepancies between the claim and the reality, whereby we are aware of the error multiplications of the previous generations, can be clearly seen in a production comparison between human and machines:

In the first case, production is carried out in a compact and integrated manner.

secondary and tertiary users of the method become incapable of realizing the reality.

As a consequence of this knowledge, a pseudo-reality is created, which due to the monotheistic influence, leads to thinking and acting in a manner, which is characterized today as success and problem-oriented approach, without actually regulating anything! This is because the capability to manage something is connected to the ability to perceive something. Only that exists, which can also be proved,- what cannot be proved, doesn't exist at all.

Paradox are scientific claims, which cannot prove their subject.

The conflict potential in the cultural

system is expressed in technology, in economy, etc. but the basic problem lies in the one-sidedness, one-level of thinking, in the loss of cultural identity, in the loss of values in general. If the distance between technology and economy to philosophy and religion becomes larger.

and religion, this is not noticed due to lack of information and in the field of technology and economy, one is unaware of its potential ! By pushing the problems to the consumer level, to which also sport belongs, and the fad of terms like smartest, best, strongest, a war loses its impression

War & Peace,- Facility Management* and similar terms as income generating concepts and more

The desire for peace is an ancient dream of humankind. To be silent and to have peace appears to be much sought, although silence is not the same thing as peace. There is the socalled silence before the storm and we have also heard of the silence of the grave.

War is something inhuman, it is said. At the same time we know, that wars can sometimes be necessary in order to maintain peace. Through wars, such elements which are detrimental to peace are atlast removed after a long process of trying to come to a peaceful solution. War and peace are not limited to economic or scientific factors but they take place almost in all areas of the western and west-oriented world. In the field of philosophy

of cruelty.

Peace is only possible, if a basis for understanding is available, a platform from which one can argument. This basis is provided generally by theory. As in case of individuals, where one party is never totally innocent and rather both parties carry a part of the blame, so is it also valid for large organizations.

If it comes to intentional war-like situation between large organizations with loss of lives, it affects the individual person much more than the anonymous mass of the large organization.

It should not come to war if human beings actually possess the much praised capacity to understand other viewpoints, generally considered as the most important criteria of differentiation between humans and other living beings, without knowing, how other organisms behave. The distribution of insects in a field can mean the beauty of flower fields for the short-term understanding of the human being, whereas it means the ultimate for

the micro-organism.

The path of conflicts can mean for some people new work opportunities and incomes*, whereas one does not really recognize a danger in it, that ist until one suddenly finds himself in the middle of the war, which one did not want at all.

We had called intellect as a medium of

The involved parties do not even realize that they are part of the conflict; because destruction does not necessarily occur through brutal force, but also through negative influence on a value system, which leads to reactions from opposite sides.

communication. The intellect does not function like a machine, but is rather hormone controlled. Although there are a number of diverse scientific theories and function models about the causes of conflicts, these can normally be explained quite clearly afterwards as to what has led to the conflict, between individuals or between large organizations, -but at that point it is normally too late: the problems are already created and they are compounded in different forms and at different levels.

In times of general confusion, such conflicts can take place so subtly, that the involved parties do not even realize that they are part of the conflict; because

destruction does not necessarily occur through brutal force, but also through negative influence on a value system, which leads to reactions from opposite sides. In this manner apparently beneficial development as understood by one person can create feelings of fear and with that aggression in the other person, without both of them actually understanding the real cause.

Conflicts do not emerge out of nothing; they are either automatic or cultural additions to the human orientation system; if the system is influenced through pseudo-theories, the basis of understanding with the other party is lost, a further input to the existing confusion!

Due to this pro or anti position, the conflict moves from one level into another, sometimes coming to agreement, but reaching another level again and again, till it comes to conflict one day (see illustration 3). That is why we often hear, that conflicts occur between individuals due to their inability to speak to one another. An anecdote makes clear such situation, which may also apply to organizations: in the first marriage year the man speaks and the woman listens, in the second marriage year, the woman speaks and the man listens, in the third marriage year the neighbors listen,- in case of large organizations, we can add the factors of self interest, wishes and aims of auxiliary organizations too.

In a phase of escalation, the physical force is not the only measure, against it, but even together with it, psychological force can also be applied, -in both cases, one is far away from creating an understanding, although the intellect has been used with all its possibilities. In such conflicts, there is an end to the relevant system (the death), a change to the relevant system till agreement, but never can we speak of resolved conflicts, even though it may look like that. This leads us to the knowledge, that development cannot take place, if there is only silence and peace and there is no war, which creates fear and leads to readjustment.

The changes to the relevant system refer to very different factors, which take many forms of influence: general disturbance, misuse of rules, demonizing the other side, etc.

The changes and the partly sub-conscious factors of influence take place in current times more and more on a technological level. To these belong not only discussions about human rights, where one party insists they are present and must be valid all over the world and the other party does not share this opinion because of cultural differences. Complex applications in security area also belong to it, so that in case of a conflict, which it is stressed- nobody wants, what one achieves for its own side, keeping human lives intact. This argument is sold quite well at least to its own people. Even if the described situation appears to be a distant possibility, a civil application of the Facility Management (see illustration 4) is nothing more than a shifting of values, of the influence, of the opposite effects of income generating measures and of the loss of incomes from work. Thanks to, or should one say, due to missing knowledge and the time to reflect, we arrive in current times to the mentioned forms of confusions. For this reason we should utilize, at least from time to time, the possibility to balance out the fundamental deficits, this requires however an appropriate realization. If this realization is not there, it must lead to conflicts, at the end of which a little understanding, a spark, like a wonder- finds its way into the human understanding.

Sometimes this spark even helps the human generation develop further,- if there are more -one can assume that there is nothing for free-, the peace is obtained on the shoulders of other unlucky people of other regions. If one would attempt to verbalize this tragedy, it would mean the end of comfortableness for the peace preachers. Strangely, there is something old enough from the middle ages, which represents an important factor to promote peace on an individual level: the love; in large organizations, the only possibility to avoid conflict is permanent dialogue, which should take place even if unresolvable limitations stand in the way. This is because the other option to the desire for a certain social order is the reality of chaos (see illustration 5).

* The considerations are based upon a model of CULTURE, in which although discussed in different dimensions from various authors, it still holds, that different cultures still have certain commonalities like a written or verbal form of dealing with each other, some sort of method for material exchanges, some form of activity to pull out of the daily routines, etc.

** As a precaution, we may point out that there are cultural systems, which have a total approach to their subjects but they are often misunderstood from outsiders as religion,- this is an important cause for many misunderstandings. There is a difference whether we consider the founder of a religion as a rhetoric personality or as a communal politician, who carries the responsibility of creating order among the chaos of human inter-action.

Technology and economic-oriented persons can gain knowledge about spiritual problems with the following authors:

1-Platon:Ueber Nicht-Wissen,

2-Sokrates:Ueber Un-Wissenheit zu spielen, um beim Gespraechspartner die Vernunft ans Tageslicht zu bringen (Maeautik).

3-Drewermann: Ueber Glauben & Denken, Denken & Wissen ■■

“Housing”

in Science and Technology

Dubai as a metaphor of out-dated construction techniques is suitable with its fantastic design-results at all levels and without any logic. The model therefore is: A major destruction of environment and misuse of resources is taking place through short-term investments and the mis-use of foreign labourers, who are even happy and not aware that they are actually contributing to destruction of their own traditional cultures.

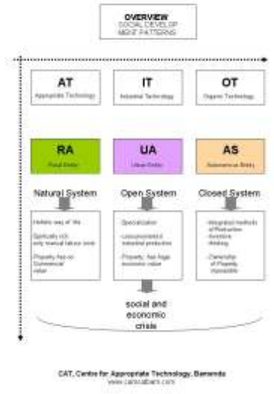
Introduction:

This article again refers to “housing”, the architectural, economical and philosophical aspects of which have already been discussed. In this article we will discuss the scientific and technological aspect (Architecture, Urban & Regional Planning) which however are not totally independent of other areas of the culture. As clear-cut diagrams and illustrations mean more than words for the engineer and scientist, the accompanying text may be considered a literary explanation of the important inter-relationship. A very simple text for the illustrations would probably not appropriately describe the total picture.

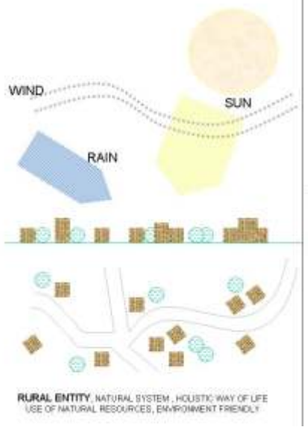
Housing in Rural, Urban and Fully-Autonomous Entities

In the following we will discuss the very basic questions of "housing" and describe the range of possibilities between the Rural Entity and the Fully-Autonomous entities, in the middle of which is the most widely practiced concept of Urban entity. Seen from a total perspective, the Urban entity is the subject as well as the object, because the actors in this system are not able to act freely as they are bound by the compulsions and dictations of economy. The actors are forced to act in the way as they do because the system does not allow any other alternative. And: the actors in the system don't even realize that they are not acting of their own but actually are being acted upon !

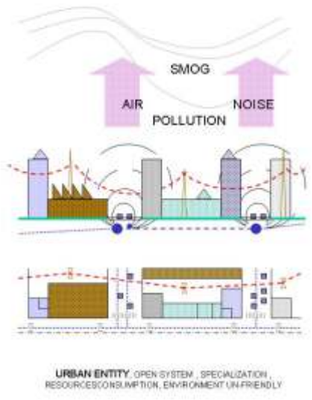
The complexity of the urban infra-structure has reached its technological climax, the innovativeness of which is marginal. Should the human organism be laid out in the manner which corresponds to modern industrial way of production, i.e. with highly differentiated functions, it would require a space of more than 10 cricket fields. This example amply describes the limitations of the so-called



CAT, Centre for Appropriate Technology, Bamenda

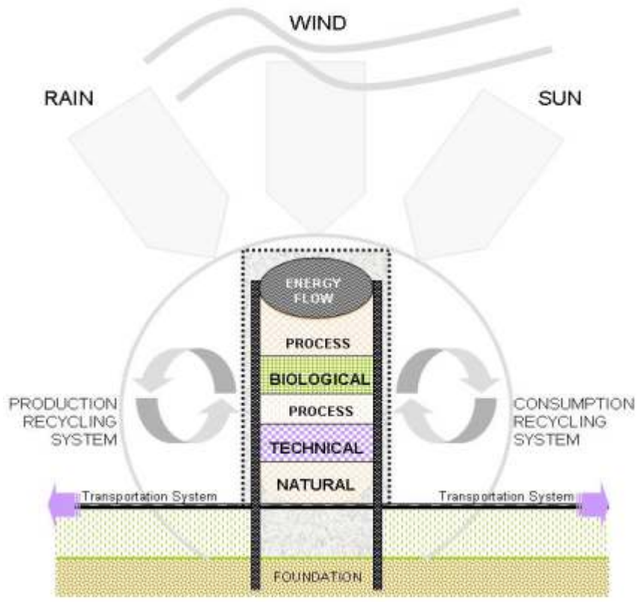


RURAL ENTITY, NATURAL SYSTEM , HOLISTIC WAY OF LIFE USE OF NATURAL RESOURCES, ENVIRONMENT FRIENDLY



URBAN ENTITY, OPEN SYSTEM , SPECIALIZATION , RESOURCESCONSUMPTION, ENVIRONMENT UN-FRIENDLY

Autonomous Entity – Closed System – Organic Technology



BIOLOGICAL...= ResidentialArea, see: *CA-toilet from Taiwan*
PROCESS...=Excrements,Urine & GreyWater Recycling, see: *Singapore Water Reclamation Study, ISS Urine-Drinkingwater Transfer, Sulabh Academy Dehli, NEWater Project from China*
TECHNICAL...see: Future Integrated Production *from Industrial Commission*
NATURAL....see: DeltaPark, GreenPort from *Netherland, China*

Closed Systems are not brand new,- see: *Turmstadt, Dr Berthold, 1929* and not only research projects like *International Space Station, Neumayer III, Prinzessin Elisabeth Station*, see: *Housing in Extreme Environment and Extreme Climate, Dr Pintsch, 1979, a.s.o.*

SPARC, Lahore

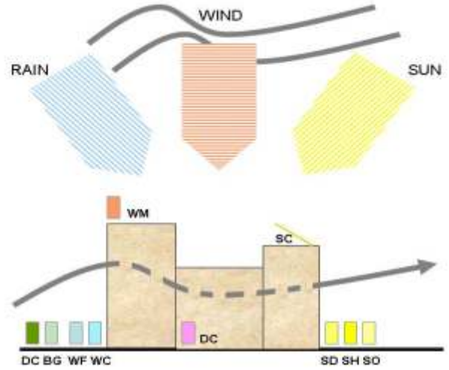
development. It is in-effective, wasteful, ruins the environment and leads to over-exploitation of resources.

Dubai as a metaphor of out-dated construction techniques is suitable with its fantastic design-results at all levels and without any logic. The model therefore is: A major destruction of environment and misuse of resources is taking place through short-term investments and the mis-use of foreign labourers, who are even happy and not aware that they are actually contributing to destruction of their own traditional cultures. The transformation actually reflects a successful implementation of a totally-outdated economic system, which becomes possible only when the state actors do not realize their mistake and it is characteristic of the ruling elite.

The terminology used in the illustrations enable us to imagine what is coming and to develop a point of view

> In case of a holistic approach, there are apparently unimportant remarks regarding other areas, which may normally appear not to belong to the subject area.

Rural Entity - Natural System – Appropriate Technology



WM	Wind Mill	Solar Collector	SC
DC	Dry Closet	Desert Cooler	DC
BG	BioGas	Solar Dryer	SD
WF	Water Filter	Solar Heater	SH
WC	Water Collector	Solar Oven	SO

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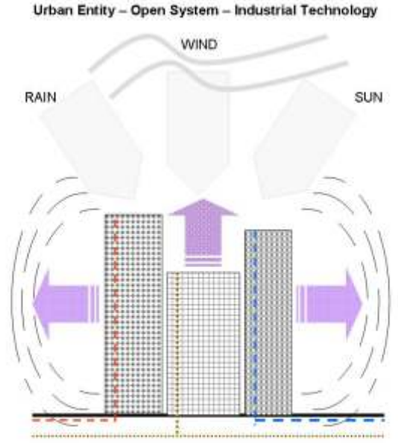
Urban Entity – Open System – Industrial Technology



Dependent upon:
Technical Infrastructure power supply – gas main – water main – drainage- – sanitation –electricity cables –
Urban Infrastructure Railway System and Railway Stations – Museums – Hospitals– Schools – Bussiness and Industry, Shopping Centres – Airport – Harbour – Parks and Recreation-etc

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increase in over it. The "new" is actually not really new, rather it has developed parallel to the existing system without being noticed.

In the existing system, generally named as Urban Entity (UE), there are hardly any logical repairs possible in the system as these under the garb of "Problem Solutions" actually represent a "Problem Deferment"!. Solutions have to be judged according to their making sense because, not everything that can be accomplished also makes sense! Infact, only the least will make sense. The sense is actually made when a self-restriction is imposed. "Luxury" in this sense would be the voluntary sacrifice of the available and restriction of the consumption!

Terms like "Sustainability", "Resource Protection", "Environmental Protection" are empty words, as long as they are not filled with logical content, they do not remain without influencing the existing system and the relevant behavior and way of life. "Renewable Energy", is another empty term, which suggests something, which is scientifically nonsense, because energy actually cannot be renewed (see: Law of Conservation of Energy). At the most, it can be transferred (energy change). In this way we can also explain another phenomena related to the educational sector: The number of educated persons does rise with the population and holders of academic degrees but not necessarily the number of intelligent persons!

Continuous creation of newer models in Marketing of products is a waste of energy and resources. This also refers to sectors, which appear far from the industrial background, namely the health sector, the educational sector etc. In totality these measures are actually a mountain of income generating measures. The residents of an Urban Entity are forced to submit to these measures. In the past when the total number of participants was very limited,, the system still functioned on the limited scale but its deficiencies become immediately evident when applied on a global scale.

Urban Life today means:

- expensive living,
- high density of residents per square kilometer,
- increasing infra-structure costs with increasing productivity of the individual, who works on more efficient machines
- sinking tax income through uniform and global production (the individuals are exchangeable, when the same thing is produced globally),
- higher water consumption,
- higher energy consumption,
- increasing environmental pollution,
- increasing social problems,
- unhealthy way of living, etc.

The more affluent here can equalize some of the problems through their purchasing power, but they are actually part of an old system and actually live on the cost of the general public.

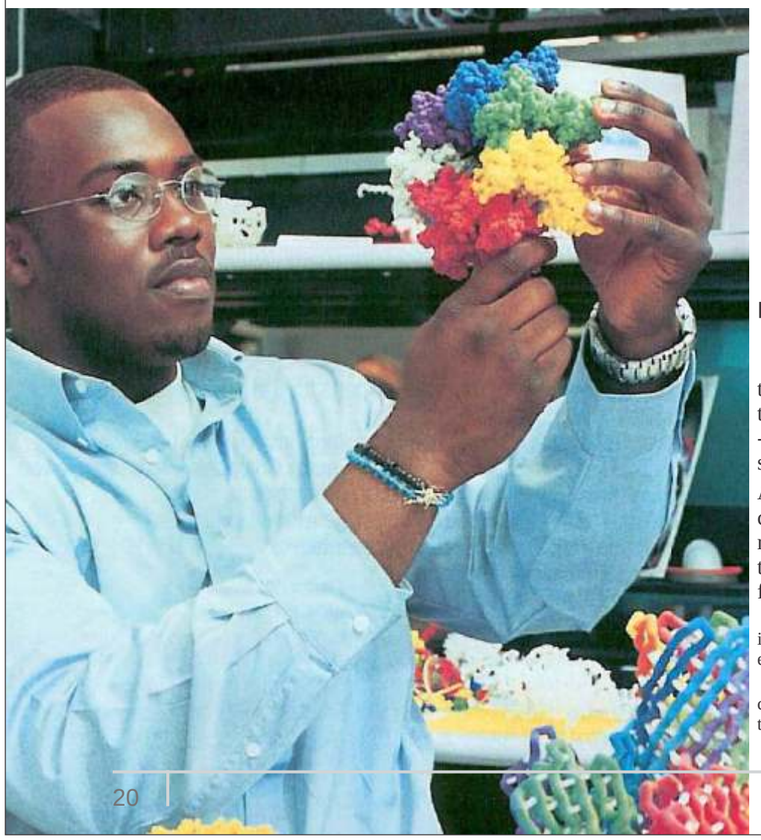
The technology therefore needs to avail literary and philosophical help in order to clarify things otherwise it will continue to confuse problem-deferment with problem-solution. It is necessary to prefer voluntary self-restraint over the income generation!

Conclusion

The article can go into more depth in professional literature, where it reaches mostly the specialists. In case of a holistic approach, there are apparently unimportant remarks regarding other areas, which may normally appear not to belong to the subject area, but are helpful in understanding the total picture by the reader. The article about "Autonomous Entity" points out information about a closed system or hides behind new ideas (for example the Zero and Plus energy houses). The transportation system points to the Flettner Rotor in the context of mobility and water and the Savonius Rotor in the context of Energy Transfer. ■■

Housing and Construction

About autonomous Bio-Molecular and Poly-Crystalline Organisms in Construction Structures



The term Housing was discussed in some of our recent articles and we referred there to the Cultural Model, in which the human effort is actively promoted, -the traditional one as well as the socalled traditional one.

Although it was not possible to completely avoid the conflict between religion and science, still we were able to describe in one go a new cultural formula.

The Inter-dependencies between the individual areas can be epoch-making, for example currently the economy.

Is an individual area so important, it can be compared with a cold star in the astronomical terminology.

In our example this would mean that the economy does continue to play its role but not in its current ly known form.

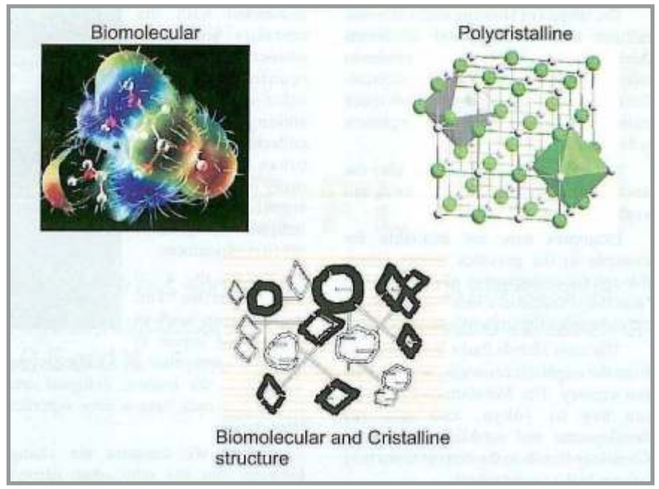
The history of science amply proves that followers of a certain surviving form or method cannot be easily convinced through arguments. As the Nobel-prize winning scientist Max-Planck once said, the next generations will be "normally" working with things that today appear to be cimpossible or non-sensical. This should mean that it takes only one generation to make unthinkable quite normal.

The technology is extremely dependent upon the economy and therefore economic considerations appear always to play a role, which however is only short-term and short-sighted and actually based upon a postponement of the problems and actually assumes the problems of Resource-wastage, environmental pollution and destruction of cultural values, which however also requires the ability to recognize these losses. One cannot and does not want to recognize something which one cannot see!

A holistic way of looking at things is the necessity here. A view of the situation in totality, which is hardly possible in the current era of times pressures, which prevent reflection on the real causes and contemplative view of things.

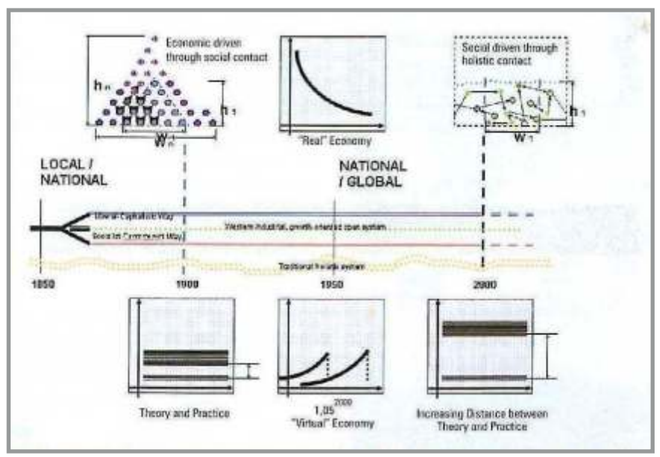
We understand ourselves as logical and systematic thinkers, but actually cannot afford to be such because it would be "philosophically" simply too laborious. This means, we would gladly like to think logically and systematically, but cannot do it because a "philosophical" consideration requires too much effort.

Buckminster Fuller and Frei Otto, both well-known construction designers of the 20th century created -possibly unknowingly- the basis for self-organizing physical-chemical constructional structures, which should enable us in current times to work towards a new form of construction.



A salient feature thereby would be return back from the current form of economy, something which originated in the 19th century, was "euro-centered" and functioning fantastically, but also very limited, because one cannot construct without money. The current construction is characterized through short-term considerations because long-term considerations are considered "un-economical".

Now, such processes should be seen not as "either-or" alternatives but rather as "as well as" options.



Traditional, conventional and industrial construction solutions will continue to exist and one will try to derive new ideas from them.

To these new ideas belong for example the concept of valuation of land, which originated in the western world and which was never so important in the traditional cultures.

To these ideas belongs also the cooking culture , which has become obsolete with the development of the foodstuff industry.

To these ideas also belongs the possibility of computer regulated toilets, which show a way away from metabolic disposal towards raw-material production.

The unintended effects of general human behaviour lead in this way to a change in climate, how else could the climatic changes have taken place in pre-historical times, - ample proof that there exist influences, which over a period of time steer and accellerate the structures quicker and in an unpleasant way.

The subject of Housing under extreme climatic and environmental conditions therefore becomes important in a hitherto unknown way found only in science-fiction novels in which a scenario of space stations and colonizations on other planets is discussed.

Not only in this context but also the developing changes ask for a new way and a new approach.

Examples here are available for

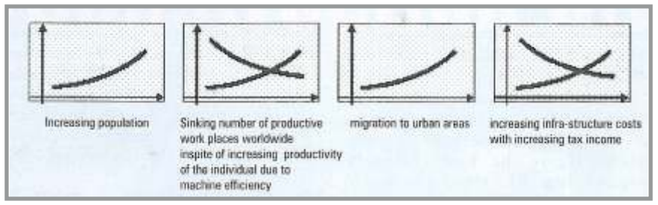
example in the previous Soviet Union through the construction of the so-called "Koslow-Productio-Lines" leading to totally uniform apartment complexes.

The term Mobile Parks is well known from the mightiest economic power of the last century. The Metabolism-Project in the bay of Tokyo; and also the development and establishment of the Container-Hotels in the current times may be seen in the same context.

The loss of traditional craftsmanship or the application of robots in the production process, all such developments are signs of severe change.

Growing populations in the cities, combined with the necessary high costs cassociated with the required technical infra-structure, the sinking amounts of collected taxes in the urban regions and many other factors are signals which also indicate a change in the urban envirionment.

Human Transpiration and Aspiration as well as Metabolism appear to be more appropriate in a closed system whereas in the modern designed urban world they



only have a very superficial importance.

Should we compare the changes between city and semi-urban lifestyles and rural lifestyles, gross differences are immediately recognizable in -for example- toilets, cooking practices, etc.

The construction is carried out technologically and therefore under economic aspects, the basic concept has however has remained unchanged.

Considering the above aspects one can recognize a certain soft tendency towards independent construction organisms, more visible in the area of Bionics. Biomolecular and polycristalline Structures will permanently change the way we live. The currently available technical infra-structure in buildings, cities, regions will be confronted with enormous challenges in such a scenario.

In future, under the current economic Dogma, a piece of land, a factory, a product, will not be able to be produced in a logical way. All states, which have taken over the western systems are limiting themselves enormously and they will not be able to cope with the problems in future.

The first examples of integrated Production lines already exist, but they are not given due importance and the current production systems considered the only possibility.

The areas discussed here amply show a critical appraisal of the deficiencies and point to the necessity of a development of holistic view of things and appropriate action.

A transformation is already taking place, in which elements of traditional cultures (technical as well as general) are appraised anew and lead to the closed system, behind which follow changes in social customs in areas like Kitchen, bath, living, working etc.

In private as well as in public life, the technical infrastructure paves the way for autonomous construction organisms, which are more directed towards the nature (biomolecular and polycristalline).

NORBERT PINTSCH, GHAYYOR OBAID & NJINI VICTOR NKUH

Housing,
Development, Culture and Infrastructure

Growing population in urban regions requires growing investments in the technical infra-structure, which is not possible to achieve due to falling number of productive work places and tax income

The term "Housing" has already been discussed by us under different aspects. Looking at the developments and applications in the various regions, we realize that the housing solutions in the Open-System are similar, irrespective of whether we are looking at the new constructions after the Tsunami-catastrophe or the colonies for leprosy patients in Grasland, Cameroon.

Ofcourse a lot of intelligent and interesting studies were carried out in the colonial period, which documented the most important aspects for consideration in the post-colonial period, an opportunity which was not taken or utilized. The reasons for this ignorance lie probably in the growth-oriented strategies and the blind euphoria about industrialization. This mistake later resulted in horrendous consequences. The situation is actually only comparable with the birth-control programs in the western nations. The western countries can hardly propogate a policy which led to stronger automobile sales while causing lower birth rates.

The current housing solutions are still based upon requirements of working parents with about two children and possibilities of living and sleeping as well as cooking and cleaning, while considering large spaces for using household appliances. This in times when productive work places are fast dissappearing due to higher machine efficiency. This development was followed in the urban areas through centralization of shopping centres. This development again was followed by many other growth oriented programmes. The infra-structure costs therefore became very high. Measures

to finance the rising costs were taken by assuming that the rubnning costs would be financed through appropriate increase in the the taxation income.

Specially the developing regions like the persian gulf countries followed this pattern by constructing in masses according to the above principle. Apart from the missing flexibility of the plans and destruction of resources, alongwith the massive need for energy, these industrially manufactured housing solutions also require modernization at a later stage similar to the end of the "shelf-

life" of the industrial goods. But this of course is of no interest to earlier investors of such programmes !

The product Apartment in the current form, as described above, has proven to be highly popular in regions, which are described as less developed. The political elite, for example in East Asia, embraced these concepts by developing a combination of models, without their being really aware of it. Visitors to these regions as well as attentive observers know the grandious constructions financed by investors. All in the hope, that additional work places will be created and the economy will further grow.

Housing-Culture-Infrastructure

We have discussed the above terms in a number of previous articles. The housing has been compared by us with economics, the technology, and the philosophy. Further, through the term Culture, we have placed the current housing construction as an ineffective effort between the holistic and closed system; the construction takes place in an open system, the main characteristics of which are wastage of resources and the misuse of energy. We have also pointed out the fallout of this practiced model: rising infra-structure costs with sinking tax income and increasing productivity of the individual person and still the loss of the associated work places.

These characteristics lead to a change in the way of thinking and the way of living, whereby the traditional methods and solutions start fading away into oblivion without our realizing it. A change of methods is evident in the construction methods and materials, as well as in the areas of cooking and the wash room in the private area and as integrated production in the manufacturing sector. Interestingly, the environmental pollution is considered here as an additional resource. The undesired production of waste and metabolism products is understood in the private sphere as raw material.. In the transformation phase from open towards closed system, the zero-energy houses are gradually grabbing the attention of the interested public.

> When public and private enterprises posess real (i.e. not virtual) money for investment into work places, they should of course use it; universities, ministries, hospitals, etc. But the fact is that they provide services without producing anything. Moreover, there is a lack of understanding for importance of individualness* of the projects.

Housing and Infrastructure

The fast paced construction of huge office and residential blocks may fill the engineers and technocrats with enthusiasm. Whoever invests in these projects, also shares this enthusiasm. The problems that may occur at a later stage are not part of discussion. The factors resources protection, environmental protection, protection of traditional culture are addressed more or less only verbally in order to satisfy critical voices. A sensible and real discussion about these factors does not fit into the growth oriented approach, which has proven to be successful for so long that its functionality is not doubted any more.

Since industrial products are heavily integrated into these concepts, it may safely be assumed that they require maintenance or replacement after a certain period of time. In any case, a huge system of infra-structure is available, which will need to be replaced after a certain period. The adaptation of prevalent systems is quickly done in the technologically friendly and technocratic atmosphere. The future investor is already happy and looks forward to the profits in the future. The realization of the wrong doing do come at a later stage, but then the costs have risen enormously due to the wrong decisions taken earlier. The infra-structure has been integrated into the building plans and changes in the so-called facility are hardly possible any more. The chance to use environment friendly energy has already been lost. The electricity still comes from the electrical socket, the water from the valve and human waste is disposed off in an expensive manner ! One can say, the

> The systems known as “closed” require a change of thinking in terms of property; an integrative production requires this in order to be able to centralize. The thinking within the housing unit must still be de-central in order

investment in innovation is zero.

The dis-inclination to innovation is evident right from in-house infra-structure to the urban infra-structure. The economic argument, that all action must be worth its economic value, are empty words not backed by an investigatio into the real causes. It is possible to calculate the costs of the wrongful investments as well as the un-considered relationship between the running costs, sinking tax income and the increasing infra-structure costs. The increase in the infra-structure costs is a direct result of the increase in the urbanization led by the -assumed- hope for a better life through a fixed work place.

Principal Statements and Summary

-Growing population in urban regions requires growing investments in the technical infra-structure, which is not possible to achieve due to falling number of productive work places and tax income. We would like to point out just one term; operational costs, which is starkly ignored in new projects.

-When everybody tries to do everything* and this is done on an international level, then it is not so that every body has more, rather everybody has lesser than what they already. have, not to speak of the mis-management of resources, nature and environment as well as the immaterial, among them cultural values.

-When public and private enterprises posess real (i.e. not virtual) money for investment into work places, they should of course use it; universities, ministries, hospitals, etc. But the fact is that they provide services without producing anything. Moreover, there is a lack of understanding for the importance of individualness* of the projects.

-The systems known as "holistic" are completely ignored through mis-understanding of the decision makers with the result, that the migration into the urban regions is continuously increasing. The potential hidden in the holistic systems remains unutilized. Mud housing, for example, is taken as a sign of poverty.

-The systems known as "open" including the design solution like Dubai, are innovation-less and overhauled, -the problem deferment is exhorbitant. Also the villas and great-looking constructions, like in the sub-continent, are only functional, when they are run de-centrally, e.g. with generators for electricity. No water supply, no air-conditioner without the electricity supply, etc. The infra-structure cannot even be properly maintained. The same is valid for bridges, tunnels and streets. Working and living in this system cannot be considered sensible.

The industrial production considers the value of land as its central point and is mis-managed. This way of production is totally out of time.

-The systems known as "closed" require a change of thinking in terms of property; an integrative production requires this in order to be able to centralize. However, the thinking within the housing unit must still be de-central in order to design in a more flexible way. New construction methods (Bio-Molecular and Poly-crystalline) and new construction materials (composite materials), as well as flexible design regarding the cooking, washing and WC-units as well as the natural and artificial lighting, the experiences from Plus-Energy-Buildings, arte changing the whole concepts of construction. Are we ready to recognize these changes!

Housing (incl. extreme housing) is not a technical problem. It should rather be considered as part of and together with the culture and with the economy, politics and society (which includes the education), - we are still very far away from this aim due to the growth-oriented approach. ■■

Dr. Norbert Puntsch

Housing under extreme environmental and climate conditions

The Mars500-Project ignores the eco-system and puts the emphasis on the social aspect (Work with the same colleagues on limited space, dealing with delayed news, which can be up to 20 minutes late due to the distance of 400 million km.

The 50th anniversary of the manned space flight has been celebrated recently. Russian as well as US-american companies offer, at appropriate price, hotel stays in the space. The fantasy appears to move again in the direction of the moon occupancy. Also the research project Mars 500 in Moscow suggests a somewhat longer tour, and then again everything would be as usual, like Pool, Sun, Feasts, etc.

Interestingly events in the research project on the Earth will take place outside of the earth. But this is of course theory,- But the fact is, that future movements away from earth will nonetheless influence life on earth. Our previous articles about housing were based upon a Cultural-Model, which would have seemed strange to engineers and technicians, but at the same time it must have made clear, how important it is to think and work in entirety (holistically), in order to achieve positive results in the long run as cultural differences therefore play an important role in this regard in the form of philosophical and religious differences. The differences are quite open in the macro-area, in the micro-area they are obvious through disturbances in relationships, e.g. toilet usage, eating habits, work culture, food preferences etc.

Underwater Laboratories and Space Stations

The construction of Off-Shore Platforms has been an important development on earth. The relevant teams are required here to work and live effectively and optimally.

Sanitary problems had to be solved in military operations in the air, from which the Civil Aviation ultimately profited.

In life under water, for example in submarines, the crew sometimes spent months under water and daily life routines (sleeping, eating, cleaning etc.) were organized in a manner, that everything went smoothly. One was supposed to be autonomous.

This is also valid for Aircraft Carriers, where the crews are provided recreation possibilities along with their military tasks. The autonomy was only a lesser problem, as one could and can rely on regular supplies.

According to brochures of hotels in space (better said in space nearer to earth), it should definitely be more comfortable as compared to research stations established under water or in space (Spacelab).

This is an analogue to the above mentioned military solutions, which have comparable solutions in civil domain: Cruise ship cabins, Camping mobiles, Rolling Hotels, Capsule hotels in Tokyo, etc.

Recalling these examples, on can probably realize, that there exist a number of permanent solutions in stark contrast to the wasteful solutions of city villas.

The possibilities discussed by NASA in the time of the boom, illustrated by the scientist, engineer and artist EHRICKE, further established visions of a biosphere near to the earth. This as a basic vision led to experiments in simulations on the earth, which however did not run successfully. In 1991 Biosphere 2 (1991-1993) was established with 8 participants on an area of over 10000 square metres and 200000 cubic metres in Arizona, in order to win experiences of a closed economic system. The steel concrete used in construction was not successful at all because it absorbed oxygen unexpectedly. In a second attempt, the six participants managed successfully to live autonomously, i.e. without the supply of help from outside.

In the area of research, we collected experiences on the south pole, -though with regular supplies from outside, but still one lived autonomously most of the time (e.g Research Laboratory Neumeier2).

The Mars500-Project ignores the eco-system and puts the emphasis on the social aspect (Work with the same colleagues on limited space, dealing with delayed news, which can be up to 20 minutes late due to the distance of 400 million km). This means in the practice, that in case of danger, one has to live and survive without outside help. A special problem of communication and information here is the time delay in the receipt of signals.

Problems arise in the general cultural area and are visible in the daily routine of city life, where people cannot get along with each other automatically (e.g. vegetarians and meat eaters, pork eaters and beef eaters, religious-cultural rites, which even on earth are sometimes difficult to manage, e.g fasting period in june or december in the higher north or south.

Challenge for Planners and Scientists We have pointed out the problem area of construction materials, which hinder an exchange between the inner and the outer spheres. On earth, mud is more energy efficient and therefore healthier and cheaper from macro-economic point of view, because it is usable without any additional energy source. Unluckily steel concrete construction and burned bricks construction has taken place and is still taking place on a massive scale. In other words construction ruins of the time to come. The energy consumption in introduction of new construction materials may look large in the beginning, but is justified in efforts aimed at achieving Zero-energy-Houses.

It is a century-long task for planners and scientists to arrive at a value, which - based upon the population per square kilometer- relates to a degree value of extent of burden possible in connection with climate, vegetation and general cultural factors. If this hypthetical value is crossed, the urban picture of today becomes obsolete and without future.

The real productivity of the individual work place in the tax system must also be taken into consideration here. Services, including education and health services although income generating measures for the relevant group, are but unproductive and serve only the spreading of the taxation network.

Affects on materialistic thinking and architecture

The survival rate of a system is best shown in extreme situations. The economic system successful in limited sphere and taken over from the west has helped to promote globalization, which automatically also means its end as well as its unrepairability. That this fact is still not recognized does not change anything.

The Europeans obtained stretches of land in Africa during the colonization period. The local rulers must have been pleased at the development. Appropriate drawings of the obtained land were not made by the foreigners because they did not understand the local way of thinking. They purchased, what was not salable in the traditional sense. In spite of that, the same principle is still applied worldwide, which shows -also here- an outdated concept is in use, which has long lost its limit of usefulness.

As a transition, the good old industrial production of goods, well based upon a piece of land, will take place more and more in integrated factories. This functions through the exchange of unusable products of one producer to value addition on the same product through another producer.

The architecture, let us call it for simplicity sake Dubai-Design, has not shown any real innovation up till now., whereas innovation does not mean that a building boasts of a helicopter landing

A view of under water restaurant in maldives

place or a seawater-swimming pool or a luxurious entrance hall as big as a football-field or a heap of childish gold and marble items, an express transport system or a mega-skyscraper. These are all mixtures of technically possible and a need for admiration. They are based upon so called successful economic system, which had already reached its climax at the end of the 20th century.

Changes in the technical central infra-structure

If we consider supply systems developed for buildings and cities in the light technology development, we are bound to realize, that these systems are based upon economic considerations. The main purpose appears to be to earn: from lighting , from water supply, from waste disposal etc.

Earning here is possible only if the number of customers is large. For this reason large units are created.

This leads to two recognizable tendencies.

The one is the enormous dependency, coupled with susceptibility.

The other is the trend towards autonomous enterprise.

Relevant to our topic of Housing, we already mentioned solutions in the High-Tech, as well as in the Low-Tech area.

Autonomous systems already exist in the HighTech area, which make the need for a central technical infra-structure pointless.

In the Low-Tech area, we may point out the experiences of the Sulabh-Academy in Delhi, which has delivered an interesting example waste disposal methods.

Influences in the social life

Six billion people on earth need space. Space, which is only usable with considerable input of energy., should be used carefully and cleverly. The expansion of the cities into the soft picture of the surrounding areas is an erroneous development, which creates new problems or only defers existing problems. Long distances and travel times, from home to the work place, point to the unsolvable problems in urban areas.

The urban region is an organism, which needs time to develop. The factor time has long been forgotten.

The different national technical solutions are just short-term concepts.

Although sea water desalination plants make possible irrigation and provide water to households, but truly said, they belong to the general public at large. Indication of the problem between national interest and international considerations.

Time is still not ripe, it appears, to point out the absurdity of intensive colonization of arid regions !

Utopia is dedicated to the far away and unreachable. Should it suddenly be there, the supposed utopia, a society can sbe overwhelmed. The foot taken away from the brake, thanks to the power of Information Technology, the information is quickly distributed over the whole surface and it is absorbed without asking any questions. The danger of the global world lies actually in quick and extensive acceptance of Information and its spreading. An Either-Or situation is directed against the evolution process. The model of multiplicity has proved itself to be most efficient in the nature. Manipulations in available systems due to misunderstood scientific knowledge and not looking at things in totality is bound to have extreme and incomprehensible long -term consequences.

Upgrading of Housing

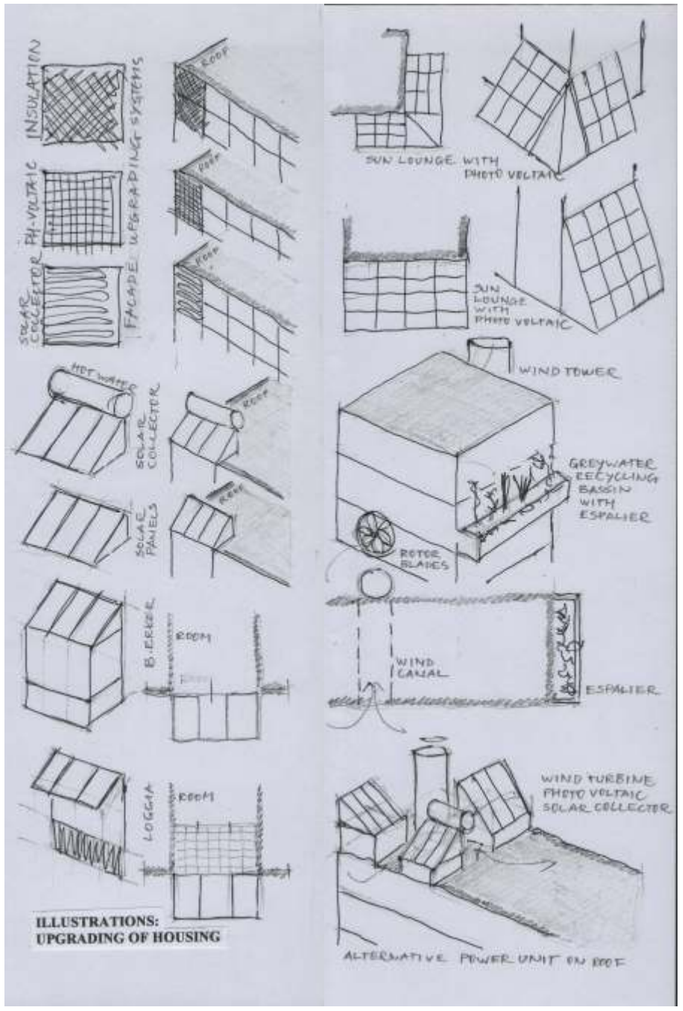
Upgrading of Housing does not refer to a new paintwork in the residence, also not the beautification of the front garden through exotic plants,-all belonging to outer presentation.

Should we look around us in the country, also for example in Lahore, the large number of new buildings please us with their fascinating designs and the unlimited number of exciting energy sources available to all.

The buildings look specially attractive on the paper before they are used by the owners. Classical styles with pretty cast iron gates and fences are enviable,- new clever steel concrete constructions suggest the US-american renaissance of the last century, . new generous glass facades on office buildings in Dubai-style dot the large wide boulevards.

The traffic engineers have implemented all the fantastic lessons learnt from the western-oriented countries in the 20th century.

It is a pleasure to fly from the darkness



ILLUSTRATIONS: UPGRADING OF HOUSING

of the night over the well-lighted urban regions and then to land. Air-conditioned arrival halls await the homecoming passengers, who move on to their residences in the pleasant climate of the air-conditioned vehicles.

The requirements of life, above all the supply of foodstuffs, are satisfied through super markets and shopping malls. No wonder then that agricultural land is not needed any more as one can buy all in the stores!

Should we find ourselves near a hospital in the evening, for example the National Hospital, we are confronted with an enormous emptiness. No wonder, almost all are healthy and contrary to many other countries, one does not suffer here from heat or cold, or from other micro-climatic affects of wrong city planning.

A re-orientation towards energy, resource and environment conserving methods of building with healthy and renewable construction materials is therefore absolutely not necessary. This also explains the need of the population living in rural areas to look towards the clever and educated city dwellers and even to migrate into the cities, so in order for example to support the production of burned bricks with a little bit of wood from the mountains and to live at last in a house made of bricks. One does'nt need to regularly repair the house any more and can take advantage of the large seemingly endless offer of work places.

One can now enjoy and afford all the technical innovations available to the city-dwellers through various advertising, and specially: the necessary electricity comes from the socket, clean water from the tap and the waste disposal is done through a soft push on a button.

Life is really wonderful this way!■■

Housing and EXTERioR

The term Comprehensive artwork is used now and then in the history of art. A comprehensive view of technology however appears to be erroneous in concept, as it concentrates e.g. mainly on Housing, the inner portion, the technology, the economics, the construction.
The complete environment should be considered while discussing housing, i.e. not only the technical-economic aspect, but also the social aspect, which leads to innovations and improvements locally and by the users.
Conceived as a technical-economic process while one plans for possible social inter-action, it looks very positive on paper.
The reality however follows other unknown laws amid importance of the time factor.
Development and acceptance needs time.

Aaron Pinsker

The term "Housing" is used as a generic term for construction activity in general.

It refers to the technological, economical and philosophical aspects in cultural context.

The consideration of the interior, like furnishing and equipment, automatically leads to the consideration of the surrounding environment.

The technological furnishing serves the supply of utilities and shows the possibilities of various devices.

These devices include, for example, individual hothouses (see article: Autonomous Struktures in TechnoBiz).

To the surrounding factors of the housing belongs the biological infra-structure for serving the users.

The technological infra-structure stretches from Low-tech till High-tech and refers in the most optimum case to the self sufficiency of the housing.

The environment of the housing refers to their collective units and can be either planned (one calls it city planning), but also of coincidental nature (one could call it organic city planning).

Actually this does not refer to a novel idea, rather to creating awareness about something forgotten.

In times of emergency, for example after wars, one utilized empty spaces for cultivation of vegetables, in order to be able to quickly feed the needy population.

Apparenbtly a discontent is brewing against the mass production (here: eatables) due to the industrialization of the foodstuff production and its enormous expansion and a desire for independence in this regard is gaining popularity.

If one considers the energy requirement for Marketing and Distribution, the view of the surrounding areas gets a new meaning: new spaces are to be utilized.

This can be the case from short-term till the long-term and continue unabated.

Plants and living beings can be concentrated in one logical system, so that not only vegetables, but also fish and meat can be produced.

This happened in the early industrialized countries for the poor sections of society through the garden units of Dr. Schreber.

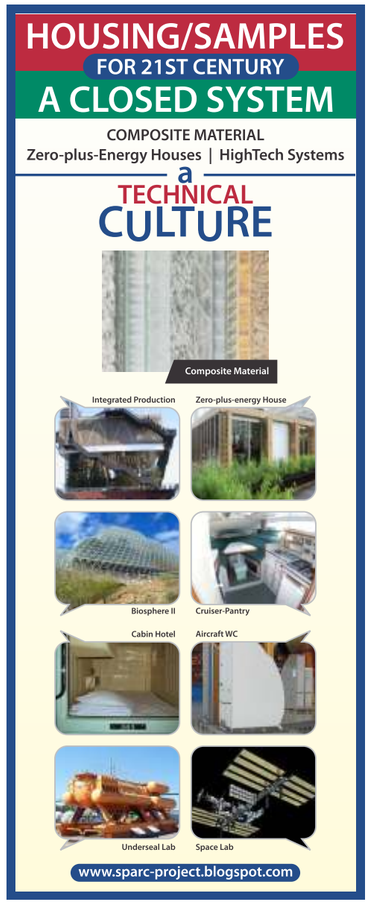
Light, air and sun on one side, fruits and vegetables as well as rabbit farming on the other hand helped to support the poor households and create a feeling of prosperity.

Knowledge and experiences from the rural areas helped the city population.

In the current times overloaded with information, one makes use of special experiments and actually follows unknowingly the footsteps of our predecessors.

Available spaces in the city can be obtained by small cooperatives and used for agricultural purpose.

Sun, air, water and earth are used in a balanced way and enable cultivation and animal breeding, serving thereby oneself as well as the surrounding users.



Faeces of the living serve as natural fertilizer for the plants.

The technical infra-structure for appropriate technology in the low-cost area for production of energy and processing of body fluids, thereby gets a new meaning and importance.

While the large scale industrial exploitation leads to standardization of high levels and inevitably towards poverty of sections of society, the resulting fragmentation of society requires more and more regulatory measures, without which the representatives of the people, namely politicians, would find it difficult to determine their areas of competency.

In normal case, the changes are integrated gradually and regulatory reforms in the form of deferment of problems, economic condiderations enjoy priority.

A comprehensive consideration would take into account the affects and consequences and therefore includes automatically other areas of the culture: Religion, Politics, and with that the immaterial and informal social network:

- the spread of epidemics,
- the uncontrolled individual development of cultures based on plants and animals,
- the economic transactions based on good neighbouurliness and not on money,
- the influences and affects on the existing "post-industrial" social system including marketing and distribution, etc.

Conclusion

Changes considered marginal are in general grave and multi-faceted than originally thought.

The existing educational structure is based upon mass ideology, believed by the individual person neither to be disturbing nor to be damaging.

Specialization in one area of profession hinders at the same time a comprehensive view of things and solutions.

Developments are not perceived, so for example also not the initiatives in the urban regions, which give the city and its residents new, almost forgotten possibilities of development: The production of foodstuffs on empty spaces inside the city through cooperatives.

The bandwidth here stretches from rather traditional forms of agriculture in small formats to integrated systems. ■■

Housing and INTERioR

As long as the billions strong and naturally produced two-legged species exists, it will require for the fulfillment of its basic functions necessary housing.

which is dependent upon climate and environment.

Since the human being in essence is the Subject as well as Object, the housing, technical infra-structure, Ambience and Interiors are subject to continuous change.

The scope of change is indifferent and unclear.

Aaron Pinsker

Of course one lives in houses.

It is only the wrongly understood architecture, by designers unaware of reality and constructors from another world, because they belong to totally different economic spheres, which serves the destruction of the environment and resources.

Although we live gladly in the thrilling atmosphere of the urban world, we would like at the same time to enjoy the rural lifestyle.

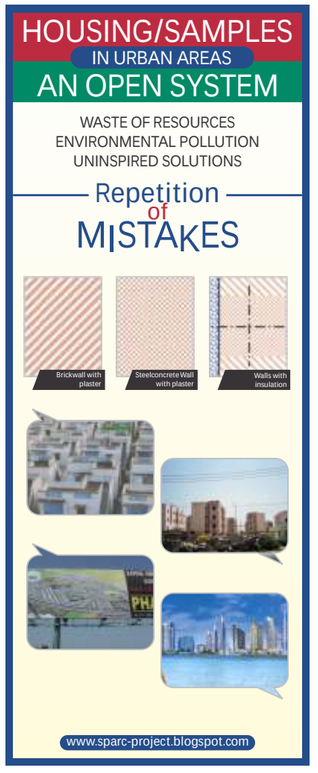
If there were all the assumed benefits of urban life available in the village, one could save the migration from the rural areas to the urban areas.

Answers available instead of more difficult options are for example the ever increasing Disney-Worlds, which move into a phantasy world and lead to an increase in the gross domestic product through income generating measures: centre park, amusement park, life like aristocrats, luxury for all, 7-star luxury, etc.

But there is always the connection between the building and the inner usage. Closet, Table, Bed, Chairs are fixed values.

This is valid for the classical way of living..

In another article, we have already referred to changes, which revolve around



the growth of cities (High rise buildings, see TechnoBiz...).

Similarly in still another article, we have focused upon the constructions (polycristalline and biomolecular structures, see TechnoBiz...), without however referring to examples in the nature.

The usage of caves is of course not something new to the world.

Of course, newly developed structures offer "possibilities of accommodation".

But how does a construction fully conform to the nature look like?

Must we think here about the romantic tree houses or is there not a more interesting combination of different organic and inorganic materials?

Construction biology and Bionics, the younger generation uses the term Construction Botanics, are the terms, which show us the way towards offering structures to the population, which are durable in certain climates and resistant to wind and water!

Knowledge of our fore-fathers is to be collected and experiments carried out in the current situation, because their type of housing is more susceptible to floods, insects, microbes etc.; Relationships between the humans and organic and inorganic materials is to be established and experimented upon.

Resistant plants in different climates are to be determined, their enemies and beneficiaries, as also the short and long-term variations in the temperatures.

On one side, the new possibilities appear to point to the heaven of opportunities, on the other hand it is important to undertake sufficient experimentation at most number of locations and -counter to the digital trend- if possible, independently and without the network of research institutes!

Courageous, small experiments are to be carried out, on location and with independent NGO's - water movement from Himalaya combined with floods towards the sea side, require examples like the mangroves in east and west Bengal.

Example could be steel pipe systems anchored into the ground and equipped with plants.

The plants provide for the walls and the roofs, the pipe structure gives hold in normal times and protection in case of catastrophe while allowing water to pass through in case of flood.

Those who know the situation in humid-hot climate, would gladly do without the solid walls.

The concrete platforms are a good basis for the survival of the residents.

The housing constructed on them may not be understood as Slums, as also the Bio-Architecture may not be seen as eccentric showpiece of some phantasy!

The question "Why" should show us the path: The "Nature" has developed itself over a long period and produced diversity; the Technology, as part of "culture" and in conjunction with the shortsighted economic concepts, is the main reason for problem deferment!

As a rule, construction is understood as a technical and controllable process.

This is correct and false at the same time; correct from a short-term standpoint and wrong from a long-term standpoint.

Standardized materials and construction processes as carefully considered elements of the environmental wavelength are tasken into account and can be measured in nthe meanwhile through instruments.

The measurements are helpful in the beginning but appear short-sighted in the long run,- new discoveries are disturbing, although there was a time, when they were one well recognized and well well considered.

The minimal changes, the affects on humans and the environment remain ignored due to short-sighted economic reasons on one hand and the unintentional hard points of view on the other hand.

The chasnges and influences are neither recorded nor considered due to short-sighted approach (Example: Health risk in the use of asbestos cement, Example: long term technical and health damage in the use of certain insulation materials, to be seen in the context of energy conservation in air-conditioners).

We can develop wonderful models, which actually work in reality in the beginning.

We develop the opinion that the knowledge from these models can lead to security for the environment and the users.

This proves itself to be a mistake in a medium to long-term consideration, as we strive to prove in the following models.

Missing knowledge and the knowledge gained from this deficient knowledge are the sources of this erroneous development, so that we are not dealing with something statistical, rather with dynamic processes, in which the sub-systems have their own dynamics.

Summary

In the times of booming information technology and nano-technology, the bio-medical possibilities of cloning, the manipulation of genetic materiaks and the networking of neuronal networks with artificial intelligence, the knowledge appears to be the art of overcoming the present only.

But the fact is that the distance between practice asnd theory is increasing and the (apparent) knowledge is actually a higher level of dis-knowledge!

Independent experiments on location in a distinct surrounding with their own micr0-climate are helpful!

Experiments on a larger scale limit the diversity and are only justified with the involvement of the industry.

■■

About Values and Change in Values

We think that we would love the progress and feel happy about the expected relief, -relief in our day to day living conditions

Our life revolves around a st of values -self imposed, unknowingly taken over and deliberate values.

We think that we are able to revise them and adjust them to the given realities, but in most cases, these are so deeply integrated into us, that we are unable to make any changes to them although we seem convinced that we are able to.

We consider ourselves to be the architect of our luck, -a result of the western way of thinking and extremely spiritualized.

It is not possible for us to orientate ourselves to the new situations without a change in values.

We want to be at ease and open minded and are surprised when we find ourselves in superficialness.

In earlier times, so we think, we were dominated by pressures of the government and higher authorities.

The exploitation of the consumer today, through us and the consumers themselves, is not felt by us at all.

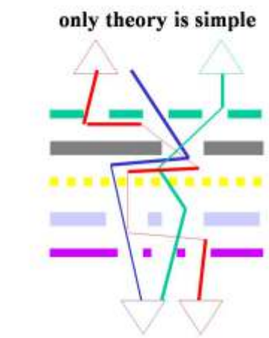
Should we consider ourselves as small part of a set of different systems, it would point to a closed system, independent of all other systems, the prerequisite of which would be mutuality.

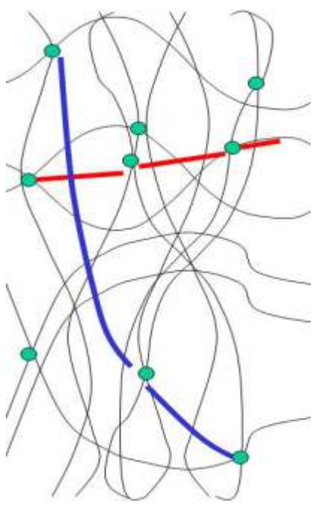
Living within the time, we are not able to observe and correct ourselves.

Apparently we recognize the consequences of what we do, but only within the scope of our possibilities and limited by what we think is possible and makes sense.

So we live, more or less actively, and set goals for ourselves without being clear about the various inter-relationships.

We think that we would love the





suggests in a subtle manner the necessity to buy a still faster computer, a still more diversely usable mobile phone, a still more exacter navigation device. This euphoria we find even in far away places and we do not understand, that the summation of the individual purchases leads to the war machinery getting more and more perfect.

We think about getting relief in the civil life but neither do we think about the consequences nor do we understand that the military consequences, financed through anonymous taxes, is actually the result of civil doings.

Whoever takes the first step towards becoming a western-style consumer is partly responsible for the happenings reported in the media, which shock him and create fear in him.

Whoever succumbs to the western style rules of the game lives the progress, who doesn't, is automatically excluded, because there can be no time for contemplative consideration as the turnover wheel, almost as second religion, has to be kept in motion.

To reflect upon things requires time and time is money, as made abundantly clear in the western approach.

The education also does not allow time to reflect upon and review the position.

The education educates on how to absorb the given instruments.

Once this has been done, one has absorbed the fundamentals of the second religion and achieved the much praised freedom. Appropriately all thinking and effort is directed towards the instruments.

Critically, it reminds of a star gazer, who observes the stars studded sky and is fixed upon looking only at the stars.