LOST VEMA

Places, Osmose, Society and Territory. Anthropic process and dynamics in VEMA

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Abstract . To understand how the human being is related to the environment he lives in implies several aspects which belong both to cultural and biological anthropology. To study the elements which influence the ways of settlement and anthropization of territory in a space-time direction is very useful in today's society, characterized by dynamics of change at different levels. VEMA, the theme of the Italian Pavillion at the Tenth Biennial of Architecture 2006, prooves the great dialogue potential between anthropology and architecture, in order to find practical solutions in the XXI century's urban context and the value of an interdisciplinary approach between different branches of anthropology. This article presents the general background of the project, that will be studied in detail thereinafter.

Key Words : anthropology; architecture; interdisciplinary character ; VEMA; anthropization

VEMA, a new city in 2026's Italy

The *LOST VEMA project:Places, Osmose, Society and Territory. Anthropic process and dynamics in VEMA* deals with the environmental, territorial, biological and cultural variables connected to a theoretically founded city at the centre of the exhibition of the Italian Pavillion at the Tenth Biennial of Architecture of Venice (2006).

Ideally the town is set between Verona and Mantova (therof its name), corresponding to the intersection of the European corridors Lisboa-Kiev and Berlin-Palermo. Franco Purini, curator of the Italian Pavillion at the Biennial Exhibition, devised the original plan and asked twenty groups of architects, aged between thirty and forty, to draw its neighbourhoods and infrastructures.

The groups involved in the project were allowed to insert items and changes to the original scheme conceived by Franco Purini : in fact the aim was to provide scope for the creativity and innovative spirit of the projects, rather than to represent an ideal city .

MASS Studio, one of the involved groups, asked Antrocom Onlus to cooperate in the planning of the the park and residential areas of VEMA. This document presents the said planning, on which basis the LOST VEMA project is developing. The final aim is to produce a theoretical resource useful for real architectural projects and suitable for different contexts. Although the different paragraphs of this article may look detached from one another, they represent different aspects of a wider picture , parcelled in its principal elements in order to explain its key principles.

Therefore we are speaking of an interdisciplinary work connecting the different branches of anthropological sciences which include and pragmatically deal with the themes involved in such a project. The process of analysis and anthropological projection of the social and territorial system of VEMA was developed starting from the definition of the different branches of study and their respective roles in the research.

Urban anthropology: the discipline based on the study of urban environments using methods and techniques typical of the anthropological research. Starting from the theories devised by the main schools in this branch (particularly the School of Chicago and the School of Manchester)[1], the group focused on applying methods and categories used in the experimental analysis of traditional societies to the urbanized society subject of the research.

Ethnology: The science dealing with the study of human groups has been connected with the project since when the VEMA society has been considered a community of ethnographic interest, that is to say an *ex nihilo* community, never observed and never studied before, imagined with its own social , economical, political and neo-religious system, born from the union of different social groups subdued to the typical dynamics of social genetics; particularly, the group tried to use an innovative approach to the *participatin observation,* the main technique of ethnographical research, which in this case appeared much more abstract than pragmatic; a retroactive observation based on the projection, in a "*not given*" social reality, of known items,

come out from the analysis of the society and complex culture , contemporary of the social groups close to the city of VEMA.

Cultural Anthropology: the interpretative line of this discipline has worked out a new foundation for the research, updating Tylor's definition of culture (1870): it no longer recalls *"that complex whole that includes knowledge, beliefs,art,morals, law, costumes and any other ability and habit acquired by man as a member of society"* but rather *"that complex whole that includes knowledge, beliefs, art, morals, law, costumes, and any other ability and habit produced by man as a member of society, and of a new society".* Therefore, a particular attention was paid to phenomena of religious and cultural syncretism, osmose and *sociopoiesis.*

Human Ecology: it uses notions and methods derived from physical anthropology, economics, ethnology and sociology to analyse the biological and environmental (broadly speaking) factors which interact in human social and cultural evolution, in the perspective of a sustainlble development. The interaction between the human biological and cultural evolution is at the centre of the studies in human ecology. (Cresta,1998; Marten, 2004)

In this article the authors outline the general picture connecting these disciplines in the LOST VEMA project, with the intention of studying its single aspects in detail later on. The article is a whole of notes for an extensive project which provides, starting from a theoretical phase, the possibility of practical applications,
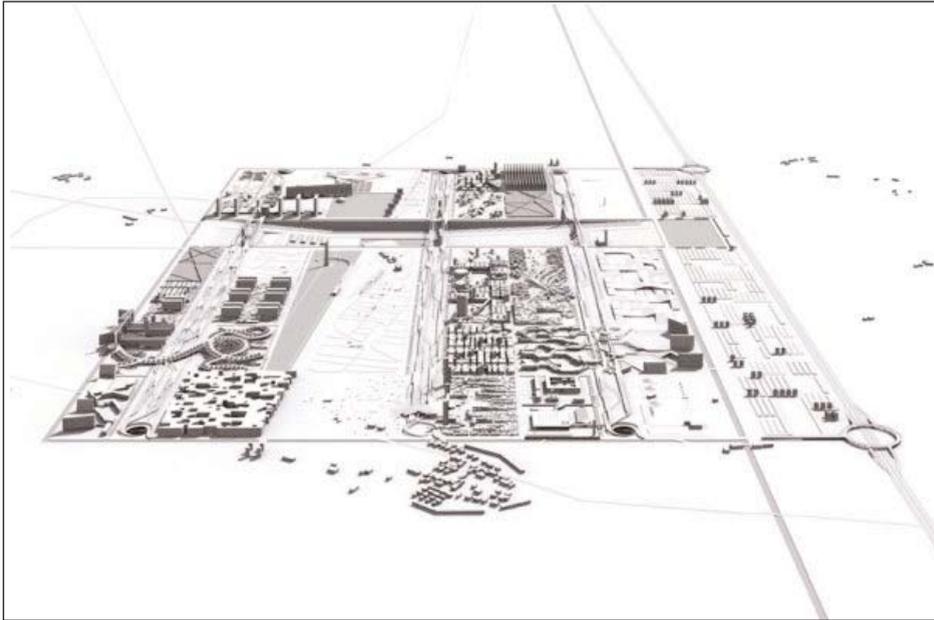
Up. Fig. 1 - VEMA scheme, the theoretically founded city set between Verona and Mantova: its plan was designed by Franco Purini.

Down. Fig. 2 - The panel illustrating the web diagram shown at the Tenth Biennial of Architecture 2006. In addition to the knots proposed by Antrocom Onlus, tables drawn by MASS Studio group are visible.

the single parts of which have been gathered and exhibited in the Italian Pavillion of the biennial of Architecture by means of a web diagram.

From now to the foundation: environmental and physiological changes

The foundation of the city of VEMA is ideally foreseen by 2006. From now to that moment a period will elapse, in which we may witness a number of progressive changes in climate due to the earth overheating[2] : according to climatologists, the increase of the average earth temperature will bring along evident changes round the 21st century's half.

It is well known that Italy is progressively parching, and the area where VEMA should be settled, the eastern Po Valley, is considered at risk from this point of view[3].

The climatic change implies a rise in the frequency and power of natural disasters, which the city might suffer quite frequently and which might determine its migration flows (Reuveny, 2007). The deriving unreliability is to be considered as an important variable in the creation of the social relationships in VEMA. It is ; to be pointed out that according to some scientists the climatic changes might start a new physiological adaptation trend (Helle *et al.*, 2007; Tyler *et al.*,2007; Welbergen *et al.*, 2007; Zhang *et al.*, 2007) selecting the population in terms of fitness and behaviour changes, as it has been already observed in several animal populations (Root, 2003).

The twenty years elapsing from the present days to the foundation of VEMA represent a fairly short time. Nevertheless it is a period in which we may witness the expression of silent or neutral mutations of the genome, while some changes arleady in progress, such as the increasing weakness of bones, the

dental modifications and the increase of human height (although becoming stable) may change the parameters used in the building of houses and other purpose structures, affecting at the same time the living style.

Several research works have pointed out how the urban environment, differently from the countryside, influences the human growth, in relation, maybe, with socioeconomical factors which are more evident in towns.

According to some studies, the store of somatic mass and the delayed menarche noticed in individuals living in rural environments is in contrast with the rapid growth observed in urban environments. This is probably due to the different quality of the sensory and social stimula of that context. Nevertheless , in other studies, this is not related to the urban environment itself, but to the socioeconomical conditions of the studied subjects. Several factors can contribute to the differences observed between the growth in urban and rural environment, not least the genic flow, more remarkable in a context in which the town acts as a catalyst of masses of individuals coming from different territories, fostering phenomena of heterosis by the bringing of new genes (Facchini, 1995; Ashrafian-Bonab *et al.*, 2007)

The consequences of urbanization come with a change in lifestyle, generally positive, and with biological stress factors which accelerate growth.

Besides, we have to consider the progressive reduction of the spermatic potential and reproductive fitness in developed countries, to coincide with the differences among the several human groups living there. This aspect is included in the possible background of the evolutive future of the human species. The question "Is man still evolving?" should be asked in different terms: "Does anybody have the same number of children?" (Balter,2005; Cohen, 2005)

The space for social relationships
Starting from the euristic concept of *space for activities* (Jess & Massey, 2006), meaning the space network of ties and activities, links and locations in which an agent (social individual) acts, we could not overlook the influence of globalization which plays an active role in the redefinition of bound-
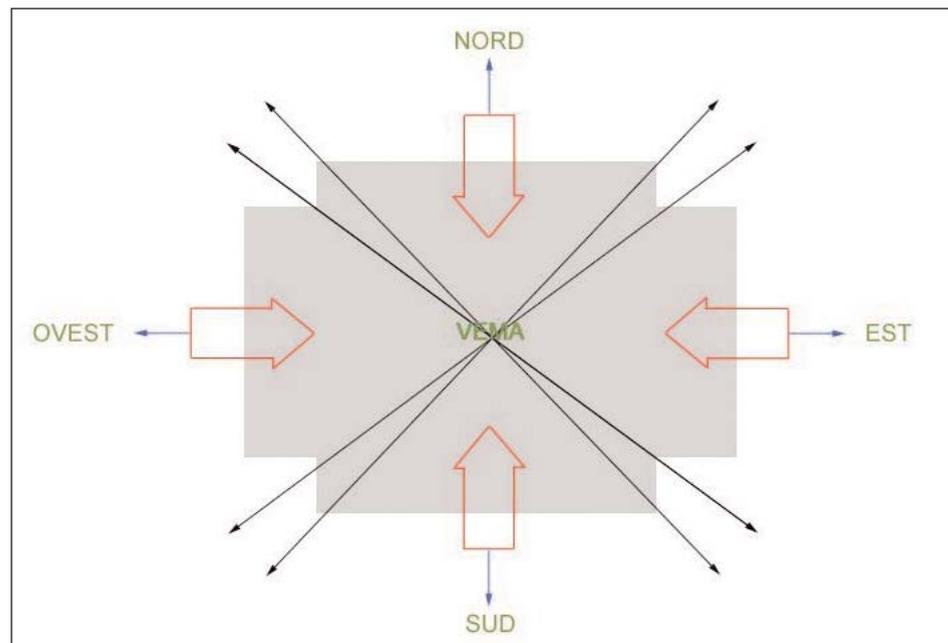

Fig. 3 - A scheme representing the flows of peopling in VEMA. IN red, the arrows indicating the arrival of individuals; in blue, the removal of individuals, in black the migratorial flows in both directions.

aries, where with "boundaries" we no longer mean territorials and geopolitical borders, but demarcation areas, fleeting and flexible, variable and permeable. The social interactions of the inhabitants of VEMA are subdued to the tough law of globalization, which imposes all sorts of exchanges (commercial, social, cultural, economical, food exchanges) outside their own living space. How can we ignore, therefore, the fickleness of such relationships? The endogenous picture that the *in situ* network analysis can provide may feed back in a warped way if we ignore other inputs from within the community   and   the   consequent response outputs of the members of the society we are studying.

How society takes form: anthropization dynamics

We imagine VEMA as an urban whole inhabited by three different types of individuals: those already settled in the territory, meaning those who would have had an active role in the creation and building of the city; those who would arrive there, and are represented as the immigration flow, and at last those who would definitively abandon VEMA to head for elsewhere .

Those belonging to the immigration flow (the"arrivals") would then become part

of those who "are" VEMA, the stable part of the society. Regarding the *space for activities* from above, within that group we have to distinguish the settled members of the society from the moving ones (such as the commuters)

The demographic balance : birth/death rate and migration
The growth of urban areas diminishes with the reduction of the members of a family , shortening the possibilities of social relationship and giving way to isolation. Besides , at a wordly level, until 2000, the young population exceeded the elderly one , while since 2003 the average number of children per pair has not allowed the ecological replacement of the species
(Cohen,2005). Here is an effect which may have wide consequences on the composition of families in VEMA and on the population density itself; in Italy this one will consist of a majority of sixty and seventy year old people, according to ISTAT projections (2005).
This is one of the considered demographic patterns : patterns differ in the premises set at the base of the study, rather than in the elaboration methods. Particularly, the pattern considered by ISTAT devises a further improvement of the surviving levels if compared to those worked out in last years : the average

life of men should increase from 77.4 in 2005 up to 8.6 years old in 2050, while women's should increase from 83.3 up to 88.8.

The number of children is also expected to increase slightly : from 1.3 per woman in 2005 up to 1.6 per woman in 2050; these data converge at the general picture of fecundity at an European level.

Moreover, the pattern assumes that there may be migratory flows of about 150 000 people per year. This number does not consider internal migrations, but only the migratory flow from and to abroad.

If the world human population is increasing (to relent around 2050), in some areas and especially in the industrialized countries we are witnessing a shortening of the population and its aging (Cohen 2005). This shortening is mostly due to conscious choices, in which converge the general improvement of life conditions but also, as said, the reduction of fecundity. There will be an elderly population which will need special aids, in proportion with the progress of medicine.

In this context, the productive and commercial activities will adjust to the new consumer target, acting accordingly and setting off the individual from the commercial *one to one* point of view, supported by technologies which make easier the contact with users.

The economical weight of an elderly person depends on his/her health condition and on social institutions activated to support him/her, on his/her socio-economical status and on the presence of children willing to assist him/her: in future times we should not underestimate any of these factors, although we are already witnessing a general improvement of health conditions.

As a matter of fact we should not forget that some chronic diseases, such as cardiovascular pathologies, diabetes and tumors are increasing and they weigh upon the sanitary budget for the most part; moreover, mental diseases and obesity related risks are expected to increase(Bloom, 2005; Mathers & Loncar, 2006).

The demographic growth involves, theoretically, the development of particularly virulent pathogenous agents, which didn't seem to regard industrialized countries until some decades ago, but due to globalization and travel facility have become real and relevant risks. An epidemic focus can quickly spread in different areas of the Earth, implying the necessity of carrying out efficacious control and prevention systems apt to oppose any possible contagion source at its very beginning. (Bloom, 2005). Transport technologies, more advanced than in the past, and climate changes which can favour the migration of allochthonous species, can increase this particular risk[4]. At the same time, incidental epidemics may accelerate the evolutive process above mentioned , where silent mutations would or wouldn't be advantageous for individuals. This mechanism was already observed in the Delta 32 mutation, able to provide a relative resitence to the HIV virus (Balter,2005).

Considering the demographic trend as above, the immigration rate from other countries should balance the zero growth of population. In 2050 the population of developing countries is expected to be six times the population of industrialized countries (Cohen,2005), which thereforewill have to prepare themselves to a strong migratory flow wherein the present transit limitation won't make sense any longer.

In the period between today and 2050, according to different statistic projections, Italy will pass from 58 to 56 or 51 million inhabitants (ISTAT,2005; Cohen,2005), and this decrease may be balanced by immigration. In this context, people over 65 will amount between 60 and 80%, according to different estimations.

Nevertheless, this datum ignores the efforts of the UN to reach the "millennium objectives" by 2015: primary education for all the children in the world, the defeat of worldly hunger and the Digital Divide abatement between rich and poor nations. These objectives may seem ambitious, but are feasible and, if reached, will lead to an important reconsideration of the migratory phenomenon. For instance, the "One Laptop per Child" project (OLPC), carried through by MIT Media Lab, aiming to provide functional computers at the cost of 100$ each, reached a tangible result, unfortunately not fully supported by enterprises. The project was patronized by the UN and several representatives of the Open Source mouvement : here is the first step towards a re-balance of the world economic force, which promises a lower

immigration towards western countries. Therefore, in any case, the population of VEMA may have a strong elderly component, and this aspect imposes a reflection about the typology of immigrants likely to settle there.

Considering what said above about the aging of population and considering that VEMA shows itself as a foundation city, we may suppose the majority of the population to consist of immigrants, who would contribute to the syncretism which we'll deal with further on, and of those who will take part in its building and formation at the beginning.

Family and neighbourhood: a hub of social network

Society is shifting towards an atomic pattern: there are now groups of people evolving towards cohabitation, while patriarchal families don't exist any longer.

The debate about Pacs and DiCo is still lively, while the concept of family as a vehicle for symbolic and religious values is loosing its significance, also thanks to the increasingly important role that the state plays in any kind of union. The nuptial contract is a legal agreement fixing reciprocal rights and duties, including the patimonial rules. At the same time,the law considers children as the beneficiaries of a social and economic service purveyed by their parents. In the case in which the union of the couple breaks, the state becomes the third parent and arbitral judge of any possible contention, where the parents have no right of veto.

All this considered, and to favour the families with children, the working places in VEMA could be provided –by the law- of company playgrounds and children care, hub of most early childhood and parenthood life in the city. The working place is turning into a nucleus of strong social integration in spite of being only a productive agent, and is becoming the place for the child-adult and adult-adult relationship, with the related positive feedback for the run of spare time.

Moreover the state in 2026's VEMA could probably have a supernational value. The consciousness of making part of a context in which the meaning of "nation" spins out in front of values of cohesion among states, may foster the necessity of increasing the value of

"ethnic belonging" ,broadly speaking, to a group, and on the other hand, it may foster the need for isolation, not recognizing a particular political/social trend. In both cases the individual would be driven towards a kind of syncretism in order to build one'own ideological space.

In the imaginary VEMA houses there wouldn't live families as we know them, but more or less stable aggregations of individuals . For what concerns the forms of isolationism, we may imagine small groups driven to aggregation by necessity rather than by their own will. With reference to this idea, the state would only be a guarantor of social order, an order in which several smaller worlds live and act.

If this is the future we foresee when we think of houses ("dens"with their own circumscribed territory, in which in the cultural syncretism symbols of status and of territory signalling come to make part), the idea of neighbourhood could develop around the shared necessity of satisfying common needs, as it happens in our cities at present, but on a smaller scale. The neighbourhood would take form like the hubs from the theory of networks, providing fast and efficient connections among distant and different elements of the population.

The more social relationships become atomic patterned, the more the social contract in big cities reduces its specific weight.

The city is no longer an opportunity, but a place to suffer where everybody distrust anybody: the way to get a relative safety is to integrate in the laws of the pack, which guarantee that everybody behave in the same way in given situations. Those who don't respect this new social contract are cast off. Those who willingly alienate from the social group rouse suspicion, becoming unwelcome and are considered troublemakers.

Therefore we have, on the one hand, the necessity of isolation, on the other hand the necessity of living together. In an urban context seen as extraneous, the neighbourhood becomes a sort of village within the city, where people can reach a balance between the two needs, still holding that at a territorial level the reciprocal interactions are governed by biological insticts already manifest in other primates.

Every individual with its own space,

nevertheless linked in the neighbourhood activities: the dimensions of neighbourhoods in VEMA describe the limits of a small town.

This picture becomes more concrete if we immagine VEMA as the forming nucleus of a new settlement : the citizens move there and have to start a new life together, in a new joint beginning. Then they would be joined by a common beginning, a particular motivation or belief. Having its own cultural background, every citizen would create the syncretism mentioned above, which, joined to the others, would give birth to something new, to the search of a transcultural individualism and to intercultural "foundation myths".

For what concerns the religious field, there would be places for the worship of any particolar faith present in VEMA, even if next year's trend will be the developing of unconfessional worship places, where people search a spiritual dimension rather than religion itself. They are therefore places arranged for universal symbologies, set in calm environments such as a park or a building far from daily life, in order to recall the spiritual retirement.

In this way, the vision of an urban reality as the one expressed by the School of Chicago may com e true : the city is a mosaic in which the single elements, even integrated, live for themselves, defined by clear borders (Thomas and Znaniecki 1918; 1920; Mead 1934; Park and Burgess 1921; Blumer 1939; 1969).

Osmosi and syncretism: the park as an activator (catalyst) of universal values
Syncretism acts like points, where the rails of everybody's life cross: rediscovering the social relationship, there may be a shift of perspective towards nature, with repercussions in the setting of public parks and gardens. Nevertheless, from this point of view we have to consider that it takes time to immigrants to assimilate the customs of the guest country, and this activates the voluntary segregation process typical of several human communities. In the environmental and urban element of the park we can distinguish some universally shared elements; they are symbolic elements, such as the tree (Eliade1974, 1996; Figuccia 2002), which we can find in different cultures at a cosmogonic level and is worshipped in many animist religions; moreover as a symbol it joins quite every

faith in the world (from Christianity, with the symbology of the tree wood cross, to the Benares Buddhist tree, African animist faith, etc.)

In these years we are witnessing an urgent and unremitting need to add contributions from abroad to our daily reference culture. By a very superficial analysis we can observe a continuous and constant search for symbols and philosophies from other cultures, an uncoscious kind of cultural syncretism. Which place can guarantee these needs better than the park? Imagine an "open-oriented" space, "open to opening", if we may make a pun, in all senses: intercultural, multicultural and intracultural: in this way the park is a cultural receptacle .

House, territory and social relationship
How could the relation with one'own house change, and how could the house itself? It being composed of functional spaces, once the function is fully complete, it's not likely to be changed, unless a new social context prefers cultural syncretism. In any case, there would be a shift in its perception: it would be no longer just a private place, but also an interface with the public, which enters the house by technology. Besides we should not leave out the fact that the house becomes virtual, with simulated furniture, changeable according to the inhabitants. This perspective is not that futuristic any longer.

Moreover, the setting of an urban system does not imply a the process of becoming sedentary, but rather a new form of

Fig. 4 - A graphic representation of VEMA dwellings elaborated by MASS Studio, conceived also on the bases of the study led by Antrocom Onlus.

nomadism (Augé, 2006) : urban centres grow, but are connected more and more tightly and fastly. High speed brings along some changes not to be ignored : on the one hand the origin of a new range of eletist commuters, on the other hand the development of railway terminals rather than of small towns along the track (Bolocan Goldstein,2004) .

So what changes is the perception of distances and of territory : what was before an urban "outback", becomes now the paradigm of the comparison with alterity, in a spatial sense, a more theoretical than physical place where we can observe globalization at work.

The town population is expected to overgrow the country population at a global level since 2007 (Cohen 2005), giving more sense to the idea of "outback", cities will grow not by density, but by extension, absorbing the surrounding fertile land and thus creating problems of food supplies. As a consequence planning the development of a city and of its green areas is necessary to reduce the environmental impact of its population, especially on its agricultural production. From this point of view, we shouldn't ignore how the interventions aimed to increase the said production can alter the ecosystem balance and damage biodiversity, with heavy repercussions in the territory surrounding the urban settlement. If they don't devise strategies to preserve drinkable water and to optimize the waste disposal , the urban population may face not easily resolvable epidemics ,although the city provides the best conditions for sanitary prevention.

What said about natural disasters has got a consequence : the shortage of water and the non-production due to the disasters might affect the suitability of the urban context for human living and the social relationships.

In the devised future background, the territory has undergone the evolution of the urban system but cannot consider the mentality of future men. As a matter of fact, the anthropologist Donald L. Hardesty (1977) noticed that "a plot of land can have a low capacity of human load, not only due to its poor fertility,but also because it is considered sacred or haunted by spirits".

Technology as the new interface towards alterity
At this moment, the political trend is

showing, on the one hand the progressive loss of will to consider the younger generations and the moral duties towards them, wherein today one goes as far as figuring the needs of one's grandchildren at most; on the other hand, a generational compression: what last century was seen as "future", was spread in time in the space of decades, while today the "future" is to come in a few years.

We have to start a deep and methodical reflection, however possible, about the social shift concerning the interactions among the actors. If the latest technological inventions have but improved, optimized , perfected and increased human abilities, (for instance referring to the communicative relations, by the internet) then we wonder which are the needs still to be fulfilled, and in which proportion.

How much human will it make us, in its ontological meaning, to automize the fulfilment of man's needs?

With mass informatics, for the first time in human history, the younger generations teach the older ones, in a process begun by the eighties'half. The fifteen year old guy , today teaches the person of fifty : elderly people belong now to a low informatic education range, while today's fifty year old people will be VEMA seventy year old people.

Considering the elderly's low potential to acquire new informatic skills due more to cultural reasons than to cognitive capability, and considering the evolution speed of the informatic components, in twenty years' time the digital knowledge is likely to be stratified in a large base pyramid: at the bottom, the population using the least of available electronic device, at the top the few able to use the new informatic knowledge at its best.

This analysis has got to consider the very evolution of technologies, at the same time able to create new needs and new usages. If nowadays, to access to the web one needs a computer connected to the telephone plug, in future we foresee a huge diffusion of wireless and at the same time the loss of specificity of the devices: the telephone is no longer just that, the same as the television, and the computer itself. The miniaturization of the equipments, the development of neural networks and of sensitive chips, the possibility of surgically inserting control components under the skin (already experimented), will make informatics

and the access to telecommunication easier for everybody.

But would an elderly population willingly accept such facilities?

These facilities, as in the case of transplanted organs and biomechanical prosthesis, already approaching a futuristic concept, put the problem of the relation with a new alterity, especially an alterity lived directly in one'own body. But even outside, with elementary robotic forms , already on sale, which do not have a human appearance, but are more than simple objects, because they are provided with a large autonomy, supplied by a decision program.

Domotics and its influence on everybody's life, the possibility of working from home (not easily implemented in these years, mostly due to social resistance), will give the possibility to create a semiautartic environment at one's own home.

All this is giving shape to the possibility of an increasing individualism and isolation of people, which keep in touch mostly by virtual relations. Medical services, e-government and e-learning facilities may cancel today's need for transfer to get any basic service. It's not by chance that the internet started to develop since the spread of e-mail, considered easier and prompt than a letter or even a phone call. At present, 88% of Italians are e-mail addicted and have to check their mail at leat once a day5. This process is developing upon an already observable situation, in which the typical mobility of the city fabric does not allow the reinforcement of a social network of mutual assistance, particularly binding in the case of elderly people, thus taking for granted the possibility of recovering means of maintenance and social support.

Beside the prevention devices, the genomic pharmacology will undergo a remarkable impulse, producing medicaments devised upon the patient 's genome and physiology. This aspect may foster the sense of individuality that the VEMA environment , in 2026, would favour for several reasons.

Town parks, the collectors of modernity
If the atomization of society takes place in this way, we'll have a fallout upon the quantity of road traffic and the quality of the air, unless any alternative solution to fossil fuel is devised.

If alternative forms of energy develop and a general change of mentality takes place, (this is desirable and feasible, considering for instance the results of the recyclable-waste collection in Italy) there will be a different relation with waste materials either organic or not, seen as a possible resource.

During the evolution of societies waste materials have been kept apart as a source of disease and social discomfort; recycled only in extreme cases, waste materials are not a resource. From this point of view, there's still a long way to go : recycled materials are still considered second choice , although they are not different from those newly produced. Town parks may be the collectors of this refuse, up to re-design some parks as "cimiteries" in which the circle of life is renewed. A recycling in the recycling. An example of "urban forest growing", stressing the symbiotic relation between man and the other natural and environmental elements.

The park, lived as a place where memory, feelings and actions stratify, the history of which reflects the behaviour of its visitors: the left things, the tracks of visitors, the different ways of living the park according to seasons reveal the "rituals" taking place in the park and the relations among the "sub-populations" regularly visiting (Maini et al.,2007ò Vidale, 2004, 2006). Human relationships are different according to the social status and everyone's interactions : the park becomes, through an ethnoarchaelogical analysis on the field, the "site" where we can discover the remains of our humanity, accomplish foundation rituals, passage rites and social syncretisms.

As a matter of fact, we souldn't underestimate the impact of technology upon memory: saving aids and their standards are always changing, and in a few years cds and dvds will no longer in use. Today's hard disks, like twenty years ago's ones, will no longer be compatible with the system, with a presumably loss of data and information. Man's digital memory is much more weaker than the organic and cultural one.

Notes

1. For a general view of these anthropological schools see the book by Sombrero, A., quoted in the bibliography.

2. There are a great many articles about the present global heating. See the dossier published by Le Scienze, "Strategie per la Terra", or the book "Clima e ambienti climatici" edited by CNR, both quoted in the bibliography.

3. For a general view of these aspects, we suggest to visit the site of ARPA Emilia Romagna (http://www.arpa.emr.it/).

4. There are several studies concerning the relation between climate shifts and the onset of pathologies. For a concret case, see Rezza et al., quoted in the bibliography.

5.   The datum is taken from a press release by Symantec dating Jan 10, 2006, summarizing the results of a study about this sub-ject commissioned to Dynamic Markets (http://www.symantec.com/it/it/about/news/release/article.jsp?prid=20060110_03) . It has not been possible to examine the whole of the study, though requested.

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