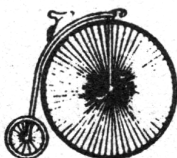


MAN AND THE CITY: the human ecosystem



"The real crisis is fundamental, arising from the very nature of our response to the human environment, and it is not merely an excess or aberration. The tragic irony is that the wealthiest and technologically most advanced country in the world (and one with a low population density) has somehow used its wealth, technology, and great expanses of life to defeat a quality of life in the cities, destroy nature, and exhaust the elements."

Kenneth Schneider, Forum , June 1971



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INTRODUCTION:

The human ecosystem has been separated from the natural environment because man, Homo sapiens?; is rapidly destroying his environment and prefers to view the world in a very anthropocentric, man centered, manner. Man is the only species in the world with such a great facility for destruction and disregard of the environment that created him. He fouls the air, the water, the land, and destroys his fellow passengers on spaceship earth, the flora and fauna. Now he threatens the very existence of life on earth with stockpiles of nuclear weapons and stands completely alone, apart from nature.

He has increasingly isolated himself from those factors which he evolved with and still needs: companionship, nature, challenge, exercise, and quiet. He has begun to pay the price with ever increasing physical and psychological disease; yet he still refuses to heed the warning signs and threatens his entire species with a dismal and uncertain future.

Culture has evolved dramatically since our paleolithic ancestors first became a distinct species but the genetic makeup that determines physiological and emotional needs has changed little. Man has adapted, at no small cost, to his new environment but there are limits to this physiologic and psychosocial adaptation and they are being reached, the recent increase in emphysema for example.

The time has come to re-evaluate man's position on Earth. Changes must be made to revise attitude and behavior so that they more closely meet man's inner needs. Only then can we ensure a future with some hope of a higher quality of life, measured not in material goods but in satisfaction and enjoyment. The time for struggle and dominion over Nature has passed, and we must search for a new and harmonious relation with Nature and with ourselves. We must recover those aspects of the environment that are satisfying and rewarding: companionship, physical and mental challenge, physical risk, exercise, clean air and water, natural settings, and a rich and diverse environment with well designed cities, homes, and tools that are made for people. Priority must be established for a good life unfettered with impracticable and expensive gadgets that waste resources, pollute the environment, and preclude better use of time and space.

Man must change to preserve and restore the quality of life. He must change to ensure a future fit for living. Can he? The planner must be involved for he, and ultimately all of us, is responsible for his actions and for the future. What will it be?

"No biological law can be relied upon to ensure that our species, man, will continue to prosper or indeed that he will continue to exist."

Dobzhansky

"We know how to knock down the mountain. But that time is over. Now we have to learn how to cultivate the garden."

Eric Sevareid

WAR IS PEACE
FREEDOM IS SLAVERY
IGNORANCE IS STRENGTH
1984 Orwell

"However, man is the sole product of evolution who knows that he has evolved and is capable of taking steps that might help to ensure survival."

V.R. Potter

"Man is that uniquely conscious creature who can perceive and express. He must become the steward of the biosphere. To do this he must design with Nature."

Ian McHarg
Design with Nature

A. Physical Needs

Man requires certain materials and activities to survive and maintain a healthy body. These include air, water, food, exercise, rest, and shelter from the extremes of the environment. The City has an effect on all of these and must be carefully designed to ensure healthy citizens, now and in future generations.

1. AIR--Man needs air to survive, if deprived of it for over six minutes he will die. The City of Davis doesn't remove this resource but pollutes it and causes sub-lethal damage to man. At times pollution has become severe enough to cause death in other cities, Donora, London, etc., but damage is more commonly associated with discomfort, irritation, and slow deterioration of the lungs. Emphysema has become the fastest rising cause of death and is now second only to heart disease in terms of total percentage of deaths. It is not a disease found in un-polluted air.

In Davis air pollution is a recurrent problem. Little monitoring of air quality has been done but simple observation will demonstrate the magnitude of the problem. The automobile is the major culprit although agricultural burning is significant at certain times of the year. The Sacramento valley has one of the highest incidences of air inversion in the country and suffers from the effects of this air stagnation. Even when the marine air is blowing through the Carquinez Straits pollution can become noticeable as the wastes of San Francisco are carried here. The pollution has become severe enough to cause crop damage in most of the Sacramento valley and yellow pine damage up to 6,000 feet in the Sierra Nevada. We breathe the same air and the damage is being done to us as well; it simply isn't visible.

What can be done? It will be difficult to clean up the air in Davis. The citizens and activities of the City are such a small part of the problem that even cessation of all emissions in Davis would result in very slight improvement in air quality; however, by setting a good example here and by lobbying effectively we can effect change. Reduction of car use, reduction of cigarette smoking, and the reduction of agricultural burning can all help but there will be a long and arduous struggle ahead.

2. WATER--Man needs only one or two gallons of water a day to survive. Deprived of it he will eventually die. In Davis we don't have to worry about complete loss of water supplies but only the pollution of our present sources. Most of the water is good water, although high in mineral content, but there is no guarantee that it will remain that way. Ground water supplies the water for Davis and is especially sensitive to pollution. Once polluted the groundwater reservoir may take decades or centuries to cleanse itself. Thus we should make every effort to ensure that pollution of the groundwater does not take place. We must also monitor the water quality more closely to determine the first signs of pollution.

Davis should also make every effort to husband the water supply. While running out is unlikely it is possible with current wasteful consumption patterns. Water meters, water charges, and education are important and should be supported.

3.FOOD--Man also needs adequate food to survive, including the vitamins, trace elements, and many other requirements of the human body. The quality of his food is reflected in his health, resistance to disease, resistance to tooth decay, and in his mental health. It is a paradox that such a rich nation has such a high proportion of poorly nourished people. Candy, coke, wonderbread, and grease burgers do not a healthy person make. The majority of the foods in the traditional grocery store are nutritionally inadequate and laden with chemicals that may be potentially injurious. The City should make every effort to encourage the citizens to eat healthy food. It should also encourage more people to grow their own foods, perhaps in city owned neighborhood gardens. The City might also do well to sponsor a "natural food day" in the middle of the summer or fall.

4.EXERCISE--Man also needs to use his body to maintain his health. The lack of exercise is probably the biggest health problems in America and is in part responsible for the high incidence of heart disease. The proportion of fat, I do mean FAT, people continues to increase and the proportion of people completely unfit continues to rise. It is the responsibility of the City to correct this situation. The City should immediately begin a program to get everyone back into shape, with the assistance of UC Davis exercise physiologist Jack Wilmore. The use of bicycles is an important step in the right direction but much more is needed.

The City should certainly investigate the vita parcours as used in Switzerland and Europe. These consist of an exercise course with exercise stations for chin ups, sit ups, etc. spread throughout the town connected with jogging trails. (Time, Feb. 28, '72, p60) In addition the City should encourage athletic competition of all sorts, from soccer to bicycle racing. Sports that actually encourage fitness should be stressed while the more traditional sports should be phased out, baseball and football just don't help that much. A yearly marathon or footrace would complement the 200 mile bike race and would attract visitors to the area.

To encourage everyone to participate is important and the City should perhaps try a Finnish idea, the town foot race. This involves an entire town challenging a neighboring town to a jogging race, or in this case a bicycle race. Davis might challenge Palo Alto or Woodland to a bicycle race to Winters and back or a jogging race to Woodland. The increasing participation in the Bay to the Breakers, the Boston Marathon, and our own double century bespeak a growing interest. The City should make every effort to keep its citizens healthy and alive, this is one way to do it.

5.REST--The human body also needs a certain amount of rest and quiet. The absence of sleep can result in illness, mental distress, and even death. Noise is probably the worst offender in the city and most of the noise in Davis is from the automobile. The freeway can be heard in most of the City and undoubtedly has a detrimental effect on the health of the citizenry. Every effort should be made to screen out the freeway noise with vegetation and hills. In Germany even the city streets are screened with deikvagelariums to protect the residents from auto and truck noise. It should be done here.

The noise from motorcycles, lawnmowers, and construction tools should also be regulated. Proper regulation, coupled with proper design of streets, houses, and neighborhoods can make Davis a quieter and healthier place to live.

6. SHELTER--Man is accustomed to protection from the extremes of the environment, yet the actual needs of his body are minimal. Man can live naked in nearly arctic conditions, Tierra del Fuego, or in the desert, Australia, with none of the shelter we consider so necessary. In fact, it is quite possible that the body will benefit from less coddling in the form of heaters and air conditioners. Shelter from the environment in Davis is an accepted practice and one that will continue--the main goal should be to plan the shelter in a manner that will use few resources, be inexpensive, simple, yet still adequate and pleasant to live in. A look at the existing housing will serve as an example of what not to do. The construction of Habitat 1967 may well serve as an example of what we should do.

B. INTELLECTUAL NEEDS

Man also needs intellectual stimulation to survive and prosper. Little research has been done concerning these needs, but they appear to include at least the following:

1. Contact and communication--Man is a social animal and still requires a certain amount of human contact and communication, probably dating from his tribal nature in the dim past. Yet it becomes increasingly difficult for man to gratify these needs due to the increasing mobility and isolation of the modern family. The detached single family home on a strip street helps contribute to this isolation by making it easier and easier to completely remove one's self from society. Multi-unit dwellings are often little better due to lack of shared spaces for common use and the result is often continued alienation and isolation. This lack of contact leads to the lack of commitment to society and results in the stories that grab headlines--"Girl raped and beaten to death while 87 listen and watch."

This contact need not be close personal contact developed over the years through dinners, meetings, and activities, all that is required is the commitment to the neighborhood and the town, inspired from knowing who the residents are and that they are committed as well. This kind of feeling can be generated by keeping the streets for people, not for cars. Motorists are often driven by the automobile, as a look at the faces on a busy street will show. Cyclists, on the other hand, have more time, are more relaxed, and more involved in the scene around them and quite often get the opportunity, and take it, of saying "Hello, how are you?", "Nice day, isn't it.", and the other often inane conversation that helps lead to a sense of belonging and of being a part of the community.

Walking is even better for encouraging contact and communication and should be encouraged through careful design of footpaths and sidewalks to encourage walking, talking, and loitering.

Contact can also be facilitated through the more enlightened design of living space. Encouraging contact involves the creation of common spaces where people can meet without formalized ritual and without personal commitment, ie: the shared laundry room, a shared tot-lot, or a shared TV lounge. Clustering of houses is a step toward more efficient use of land and resources, including the human resource.

2. Challenge is also necessary for man to survive. This can be the challenge of winning a game of poker or solving a problem or designing a building or selling a house. It is in part the city's

responsibility to see that challenge is not lacking; and sponsoring competitions is probably one of the more effective methods of accomplishing this, ie: a city sponsored Art Competition, with painting, sculpture, photography, writing, music etc. Winner to receive some reward and recognition of his success. Educational challenge is also very valuable and should be further encouraged with an expanded City/university program of extended learning.

A diverse and interesting environment can provide challenge and stimulation throughout the day--during commuting, during lunch break, at home and even at work. There are many other reasons for encouraging diversity--but this is one of the best.

Work situations can often provide the necessary challenge, and the City bears some responsibility for insuring (in so far as they are able) that the industries that locate here will provide both challenge and satisfaction in their employment opportunities. Very few jobs don't offer challenge, whether it is to be the best gardener or architect makes little difference. To encourage everyone to feel challenged is a legitimate role of the City and one that can be fulfilled by honoring the best companies in town with a yearly award--for the best product, best defined in terms of aesthetics, efficiency, economy, and durability (not necessarily in that order); and also for the company with the most prompt, efficient, and competent services.

3. Human Scale: Another necessary attribute of the City must be the retention of human scale, not depersonalized and built for viewing from the moon, but designed to be comfortable for even the smaller children. This includes keeping needed services in reach of the pedestrian and cyclist--the 50% of the people who don't own a car or have a driver's license, the long-suffering minority who have payed the taxes that built the roads that they can't use. Man must also feel that he has a voice in the affairs of state that govern his behavior, and it would probably be useful to set up neighborhood councils to more intimately involve man--and to give him the feeling of responsibility and power that he needs.

4. Privacy: Privacy is also an ingredient that appears to be an important part of the City experience. In a small town everyone knows everyone and what they are doing. In the City this is no longer true and people have a greater freedom in their actions--one of the benefits of the City. The difficulty comes in ensuring that people have adequate chance for contact and communication while ensuring that they can maintain much needed privacy.

5. Safety: Man also needs some assurance that he will not be mugged, beaten, or otherwise disturbed if he is to enjoy life. Good design of streets and bikeways is essential for safety and for mental well being. Adequate fire, police and ambulance service are also important. However, the most important aspect of the City in terms of safety is the knowledge that people are committed, and will help you if you need it.

But man also needs risk and every effort should be made to allow those sports that can satisfy this need legitimately: motorcycle racing, skydiving, and bicycle racing to name a few.

6. Aesthetics: Aesthetics is another factor that affects man's well being. Clutter from billboards, wires, and sterile design can cause physiological and psychological responses, as anyone who visits Carmel and then drives into South San Francisco can attest. It has also been demonstrated in the varying failures and successes of urban renewal. The under-grounding of wires and elimination of antennae would be a good start and much has already been done. The careful review of proposed plans can help relieve monotonous and sterile design of buildings and ensure a more enjoyable place to live. Care can also ensure that bike racks are attractive and interesting, ie. in Amsterdam there are an endless variety of rack designs, all of which are infinitely more attractive and practical than those used in Davis. Sign ordinances can also be very useful in eliminating visual clutter and efforts continue to pay dividends in this respect. City signs should (and are) becoming models of beauty and function, pragmatic and aesthetic. The use of international symbols, the National Park Service Modified Clarendon type (the product of extensive research), and weathered steel safety snap-off posts would encourage more innovative sign design among the business community and could set a precedent for the City to follow.

It is also important to preserve scenic lands and scenic views, including the view of the Sierras. The inclusion of new hills in the City would allow more people a clear view of the Sierra and Coast Ranges.

7. Recreation: Recreation is used to fill many of our primeval needs, albeit unknowingly, and must be provided in adequate supply to satisfy the demand. This should be covered in the recreation element but a little redundancy won't hurt. The provision of recreational opportunity requires knowledge of user preference and the City should undertake a survey to determine what people, from youngsters and old-timers, want. Shuffleboard? Velodrome? Skate boards? Parks? Archery? Motorcycle course? Football fields? Obstacle courses? A better recreational environment will require innovation, imagination, and hard work but will pay very rewarding dividends.

8. Wildness: As H.D. Thoreau said, "In wildness is the preservation of the world."

Wild areas are also an essential part of the human ecosystem and can enhance the quality of life for all. They have already been mentioned under earlier sections but their greatest value is in enabling man to recover, if only for a short while, his equilibrium through contact with the environment that molded him. Keeping land wild has certain benefits and costs associated with it, economic and social, and there are those who would argue that any price is too high and those that would argue that no price is too high. It is

not a question amenable to complete rationalization, although 'wild areas' can be supported for many real and imagined values, and rests ultimately on the emotional and psychological set of the individuals involved. I am one who believes that 'wild areas' are essential to human well being and I would say that no cost is too high. The values of 'wild areas' to me are listed below and can apply to a vacant lot, a creek side, a marsh, or a wild corner of a lawn:

- 1) The quiet-the sound of wind in the grass, of birds, of frogs and insects, of silence rather than the roar of traffic.
- 2) The beauty- of sunrise, the veins on a leaf, a butterfly rather than the clutter and ugliness of suburban or urban development.
- 3) The peace-of time to pause and reflect, to wonder why that ant is going where he is, rather than the press of commitments and frantic pace of society.
- 4) The challenge-to climb a tree, to jump a brook and not know whether you'll make it.
- 5) The solitude-to be alone and apart, relying on yourself, rather than jammed into a busy office or classroom.
- 6) The exercise-having to walk or crawl or run if you want to move, rather than having cars, busses or bicycles to carry you around. To feel the muscles work and sweat and be physically rather than mentally exhausted.
- 7) The pain-of falling out of a tree, of not quite jumping the brook, of stepping in a thorny plant-rather than the isolation and protection afforded in a house or on the street.
- 8) The pleasure-of sun on your back on a cold day, of making the jump across the brook, of understanding why the ant is going where he's going, rather than the routine 'blahs' of 'civilized living'.

CONCLUSION

Man has many physical and psychological needs that can be met in the City only through careful design and policy. It is important and necessary for the City to take the leadership position in making Davis a better place to live. THE CITY IS FOR PEOPLE.

Further reading:

- Rene Dubos (1965) Man Adapting, Yale University Press, New Haven
Jules Henry (1964) Culture Against Man, Vintage Books, New York
Ian McHarg (1969) Design with Nature, Natural History Press, New York
Aldo Leopold (1948) Sand County Almanac, Ballantine Books, NY 1970.
Thomas Detwyler (1971) Mans Impact on Environment, McGraw-Hill, New York.
F.F. Darling and J.P. Milton (1966) Future Environments of North America, Natural History Press, New York.
Howard Iltis (1971) "Technology vs Wild Nature: What are man's biological needs," Northwest Conifer, v17, n4.

Man became outdated within a couple of years, feminism improved our discussion of needs/wants/goals - better to use human DB 1992