TOWNS

This process can be implemented by regional zoning policies, land grants, and incentives which encourage industries to locate according to the dictates of the distribution.

towns of 1,000,000 – 250 miles apart
towns of 100,000 – 80 miles apart
towns of 10,000 – 25 miles apart
towns of 1,000 – 8 miles apart

As the distribution evolves, protect the prime agricultural land for farming—AGRICULTURAL VALLEYS (4); protect the smaller outlying towns, by establishing belts of countryside around them and by decentralizing industry, so that the towns are economically stable—COUNTRY TOWNS (6). In the larger more central urban areas work toward land policies which maintain open belts of countryside between the belts of city—CITY COUNTRY FINGERS (3) . . .
3 CITY COUNTRY FINGERS**
... the distribution of towns required to make a balanced region—DISTRIBUTION OF TOWNS (2)—can be further helped by controlling the balance of urban land and open countryside within the towns and cities themselves.

† † †

Continuous sprawling urbanization destroys life, and makes cities unbearable. But the sheer size of cities is also valuable and potent.

People feel comfortable when they have access to the countryside, experience of open fields, and agriculture; access to wild plants and birds and animals. For this access, cities must have boundaries with the countryside near every point. At the same time, a city becomes good for life only when it contains a great density of interactions among people and work, and different ways of life. For the sake of this interaction, the city must be continuous—not broken up. In this pattern we shall try to bring these two facts to balance.

Let us begin with the fact that people living in cities need contact with true rural land to maintain their roots with the land that supports them. A 1972 Gallup poll gives very strong evidence for this fact. The poll asked the question: "If you could live anywhere, would you prefer a city, suburban area, small town, or farm?" and received the following answers from 1465 Americans:

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<table>
<thead>
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<tbody>
<tr>
<td>City</td>
<td>13%</td>
</tr>
<tr>
<td>Suburb</td>
<td>13</td>
</tr>
<tr>
<td>Small town</td>
<td>32</td>
</tr>
<tr>
<td>Farm</td>
<td>23</td>
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And this dissatisfaction with cities is getting worse. In 1966, 22 percent said they preferred the city—in 1972, only six years later, this figure dropped to 13 percent. ("Most don't want to live in a city," George Gallup, San Francisco Chronicle, Monday, December 18, 1972, p. 12.)

It is easy to understand why city people long for contact with
the countryside. Only 100 years ago 85 percent of the Americans lived on rural land; today 70 percent live in cities. Apparently we cannot live entirely within cities—at least the kinds of cities we have built so far—our need for contact with the countryside runs too deep, it is a biological necessity:

Unique as we may think we are, we are nevertheless as likely to be genetically programmed to a natural habitat of clean air and a varied green landscape as any other mammal. To be relaxed and feel healthy usually means simply allowing our bodies to react in the way for which one hundred millions of years of evolution has equipped us. Physically and genetically, we appear best adapted to a tropical savanna, but as a cultural animal we utilize learned adaptations to cities and towns. For thousands of years we have tried in our houses to imitate not only the climate, but the setting of our evolutionary past: warm, humid air, green plants, and even animal companions. Today, if we can afford it, we may even build a greenhouse or swimming pool next to our living room, buy a place in the country, or at least take our children vacationing on the seashore. The specific physiological reactions to natural beauty and diversity, to the shapes and colors of nature (especially to green), to the motions and sounds of other animals, such as birds, we as yet do not comprehend. But it is evident that nature in our daily life should be thought of as a part of the biological need. It cannot be neglected in the discussions of resource policy for man. (H. H. Iltis, P. Andres, and O. L. Loucks, in Population Resources Environment: Issues in Human Ecology, P. R. Ehrlich and A. H. Ehrlich, San Francisco: Freeman and Co., 1970, p. 204.)

But it is becoming increasingly difficult for city dwellers to come into contact with rural life. In the San Francisco Bay Region 21 square miles of open space is lost each year (Gerald D. Adams, "The Open Space Explosion," Cry California, Fall 1970, pp. 27–32.) As cities get bigger the rural land is farther and farther away.

With the breakdown of contact between city dwellers and the countryside, the cities become prisons. Farm vacations, a year on the farm for city children, and retirement to the country for old people are replaced by expensive resorts, summer camps, and retirement villages. And for most, the only contact remaining is the weekend exodus from the city, choking the highways and the few organized recreation centers. Many weekenders return to the city on Sunday night with their nerves more shattered than when they left.
When the countryside is far away
the city becomes a prison.

If we wish to re-establish and maintain the proper connection
between city and country, and yet maintain the density of urban
interactions, it will be necessary to stretch out the urbanized area
into long sinuous fingers which extend into the farmland, shown
in the diagram below. Not only will the city be in the form of
narrow fingers, but so will the farmlands adjacent to it.

The maximum width of the city fingers is determined by the
maximum acceptable distance from the heart of the city to the
countryside. We reckon that everyone should be within 10 min-
utes’ walk of the countryside. This would set a maximum width
of 1 mile for the city fingers.

The minimum for any farmland finger is determined by the
minimum acceptable dimensions for typical working farms. Since
90 percent of all farms are still 500 acres or less and there is no
respectable evidence that the giant farm is more efficient (Leon
H. Keyserling, Agriculture and the Public Interest, Conference on
Economic Progress, Washington, D. C., February 1965), these
fingers of farmland need be no more than 1 mile wide.

The implementation of this pattern requires new policies of
three different kinds. With respect to the farmland, there must
be policies encouraging the reconstruction of small farms, farms
that fit the one-mile bands of country land. Second, there must
be policies which contain the cities’ tendency to scatter in every
direction. And third, the countryside must be truly public, so
that people can establish contact with even those parts of the land
that are under private cultivation.

Imagine how this one pattern would transform life in cities.
Every city dweller would have access to the countryside; the open country would be a half-hour bicycle ride from downtown.

Therefore:

Keep interlocking fingers of farmland and urban land, even at the center of the metropolis. The urban fingers should never be more than 1 mile wide, while the farmland fingers should never be less than 1 mile wide.

Whenever land is hilly, keep the country fingers in the valleys and the city fingers on the upper slopes of hillsides—AGRICULTURAL VALLEYS (4). Break the city fingers into hundreds of distinct self-governing subcultures—MOASIC OF SUBCULTURES (8), and run the major roads and railways down the middle of these city fingers—WEB OF PUBLIC TRANSPORTATION (16), RING ROADS (17). . . .
51 GREEN STREETS**
... this pattern helps to give the character of local roads. Even though it only defines the surface of the road, and the position of parking, the gradual emergence of this pattern in an area, can be used, piecemeal, to create looped local roads (49), T junctions (50), and common land (67). This pattern was inspired by a beautiful road in the north of Denmark, built by Anne-Marie Rubin, and illustrated here.

There is too much hot hard asphalt in the world. A local road, which only gives access to buildings, needs a few stones for the wheels of the cars; nothing more. Most of it can still be green.

In a typical low density American suburb, more than 50 per cent of the land is covered with concrete or asphalt paving. In some areas, like downtown Los Angeles, it is more than 65 per cent.

This concrete and asphalt have a terrible effect on the local environment. They destroy the microclimate; they do nothing useful with the solar energy that falls on them; they are unpleasant to walk on; there is nowhere to sit; nowhere for children to play; the natural drainage of the ground is devastated; animals and plants can hardly survive.

The fact is that asphalt and concrete are only suitable for use on high speed roads. They are unsuitable, and quite unnecessary, on local roads, where a few cars are moving in and out. When local roads are paved, wide and smooth, like major roads, drivers are encouraged to travel past our houses at 35 or 40 miles per hour. What is needed, instead, on local roads is a grassy surface that is adapted to the primary uses of the common land between the buildings, with just enough hard paving to cope with the few cars that do go on it.

The best solution is a field of grass, with paving stones set into it. This arrangement provides for animals and children and makes the street a focal point for the neighborhood. On hot summer
days the air over the grass surface is 10 to 14 degrees cooler than the air over an asphalt road. And the cars are woven into this scheme, but they do not dominate it.

*Paving stones.*

Of course, such a scheme raises immediately the question of parking. How shall it be organized? It is possible to arrange for parking on green streets, so long as it is parking for residents and their guests, only. When overflow parking from shopping streets and work communities sprawls onto streets that were intended to be quiet neighborhoods, the character of the neighborhood is drastically altered. The residents generally resent this situation. Often it means they cannot park in front of their own homes. The neighborhood becomes a parking lot for strangers who care nothing about it, who simply store their cars there.

The green street will only work if it is based on the principle that the street need not, and should not, provide for more parking than its people need. Parking for visitors can be in small parking lots at the ends of the street; parking for people in the individual houses and workshops can either be in the same parking lots or in the driveways of the buildings.

This does not imply that commercial activities, shops, and businesses should be excluded from residential areas. In fact, as we have said in scattered work (9), it is extremely important to build such functions into neighborhoods. The point is, however, that businesses cannot assume when they move into a neighborhood that they have the right to a huge amount of free parking. They must pay for their parking; and they must pay for it in a way which is consistent with the environmental needs of the neighborhood.
Therefore:

On local roads, closed to through traffic, plant grass all over the road and set occasional paving stones into the grass to form a surface for the wheels of those cars that need access to the street. Make no distinction between street and sidewalk. Where houses open off the street, put in more paving stones or gravel to let cars turn onto their own land.

* * *

When a road is a green street, it is so pleasant that it naturally tends to attract activity to it. In this case, the paths and the green street are one—COMMON LAND (67). However, even when the street is green, it may be pleasant to put in occasional very small lanes, a few feet wide, at right angles to the green streets, according to NETWORK OF PATHS AND CARS (52). In order to preserve the greenness of the street, it will be essential, too, to keep parked cars in driveways on the individual lots, or in tiny parking lots, at the ends of the street, reserved for the house owners and their visitors—SMALL PARKING LOTS (103). Fruit trees and flowers will make the street more beautiful—FRUIT TREES (170), RAISED FLOWERS (245)—and the paving stones which form the beds for cars to drive on, can themselves be laid with cracks between them and with grass and moss and flowers in the cracks between the stones—PAVING WITH CRACKS BETWEEN THE STONES (247). . . .