Landscapes and Settlements of Rural Regions

The basic human needs are food, clothing, and shelter. Of these, buildings reveal the most about a culture and those who build them. Early humans lived in bands containing from a dozen to perhaps 60 individuals which moved as nomads from place to place, setting up a temporary campsite in each place. Communal living gave way to more family-oriented dwellings, designed to accommodate single families rather than larger groups. Communities became larger and more highly organized, developing rules for marriage, inheritance, food allocation, and so on. The chief or headman's residence would appear more imposing than the others, and facilities were needed for the storage of food and implements. Thus, there began some **functional differentiation** in buildings (based on the purposes or activities to which they are devoted).

It was not until the development of agriculture that "permanent" settlements became the norm. When large permanent settlements evolved, buildings became even more substantial, specialized, and permanent. In the beginning of the 21st century, about half the world's population still resides in rural areas. This is because the vast majority of humanity still farms the land, often in ways that have not changed significantly. In portions of East and South Asia as many as three out of four residents may live in a rural area. By contrast, in the United States, Canada, Western European countries, Japan, and Australia there are far more urban than rural dwellers, reflecting changes in industrialization, transportation, and urbanization over the last 100 years.

Rural Dwellings

The **cultural landscape** is the human imprint on the Earth's surface, and no human activity produces a more visible cultural landscape than agriculture. Much can be learned about a culture by observing rural settlement patterns. The forms, functions, building materials, and the spacing of rural dwellings reveal much about a region and its culture. The compact, crowded agricultural **nucleated settlements** of India, for example, designed to conserve land for actual farming, stand in sharp contrast to the widely scattered **dispersed settlements** of the American Great Plains where more land may be actually occupied by buildings on each farm than the Indian farmer has for cultivation. In the U.S. Midwest, the land is intensely cultivated, but by machine rather than by hand.

Although cultural traditions promote continuity in building types and styles, time does bring change (as it definitely has in the U.S. Midwest, for example). Except for the core regions, most societies construct their dwellings of whatever local material is available commensurate with their experience and the natural environment. The selection of the building material is also an indication of the climate of the region.

We can classify dwellings into four groups- 1) unchanged-traditional, 2) modified-traditional, 3) modernized-traditional, and 4) modern:

Unchanged-traditional houses (both permanent and temporary) are those in which layout, construction, and appearance have not been significantly altered by external influences over the past century.

Uygur yurt in Xinjiang Province, China

Such is the domestic architecture seen in Arab towns, African villages, rural settlements in China, and other places remote from or resistant to foreign influences. One example is the *yurt*, a tent-like Central Asian nomad's dwelling, erected on wooden poles and covered with skin, felt, or hand-woven textiles in bright colors. The Masai in Kenya sometimes construct their homes (*manyattas*) out of **wattle** – built from poles and sticks, which are woven into a tight network and plastered with mud.

Masai manyatta, Kenya

Where wood is not readily available, houses are likely to be built out of **brick**. Although we tend to define brick as a hard, cement, and oven-baked block; elsewhere in the world, bricks are made of whatever is available. Sun-dried brick (sometimes mixed with straw) is widely used as a building material in places like the Middle East, Middle

and South America, northern India – even in places like the savannalands of Africa (flat grasslands of tropical and subtropical climate).

Dogon village, Mali, West Africa

In some low-latitude regions, **grass and brush** are the most common building materials. The African savannalands, West Africa south of the *Sahel* (a semi-arid region south of the Sahara Desert), East Africa's highlands, and parts of South Africa form the major region of this type of dwelling. Grass-and-brush construction can also be found in South America, as well as Northern Australia.

Uros reed dwelling, Lake Titicaca, Peru

Building with **natural stone** developed in central and southern India, Tibet, and areas of western China.

Stone house, Nepal

Among the truly amazing adaptations of the environment was the invention of the igloo by Inuit peoples in the frozen northlands, using as building material the very snow and ice against which they sought to protect themselves. It must be noted, however, that although an igloo can provide adequate protection for weeks in severe cold, it was and is used almost exclusively as a temporary shelter while traveling. The belief that Eskimos and other polar-dwellers live in igloos permanently is nothing more than a myth.

An Inuit hunter kneels outside his igloo at dusk, Northwest Greenland

In **modified-traditional** dwellings, new building materials have been used or elements added that do not fundamentally alter their original structure or layout. Corrugated iron for roofing, for example, provides better protection against rain and moisture, cannot be infested by disease-carrying vermin or insects, and often serves as a catchment for fresh water. Other modifications include the addition of windows and wooden doors. Log houses around Scandinavia with sod-covered roofs conserve warmth during the cold winter, but must deal with rot problems in the supporting wood. Log houses require considerable labor, to say nothing of available timber and transportation needs. They usually indicate a period of severe winter. Cut wood (*lumber*) is not immediately available in many areas and is expensive. Traditional rural societies are not wealthy and therefore cannot afford, for example, to import wood from great distances if it is not immediately available locally.

Sod farm house, Iceland

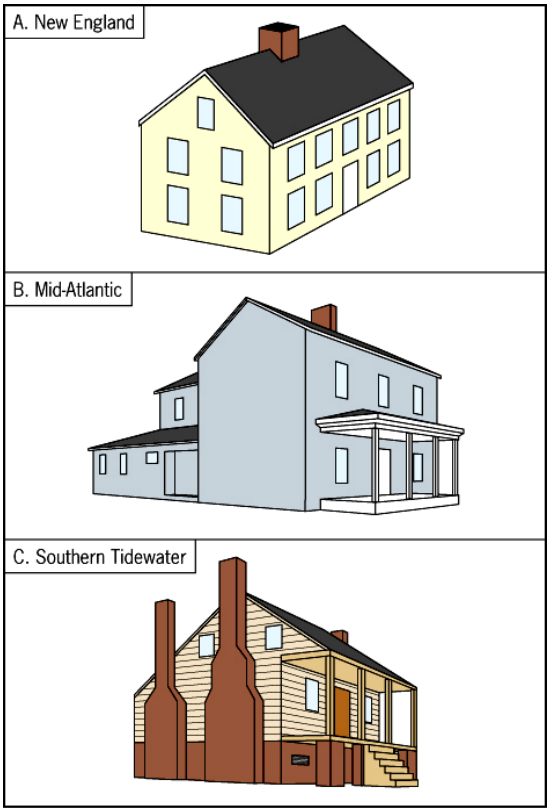
Another modification of traditional dwellings is the raised floor. Without changing the basic structure, the practice of raising the floor has the effect of decreasing the amount of moisture inside the dwelling, thus reducing discomfort and disease. Another purpose of the raised floor is to prevent flooding along coastal regions. Several colonial governments therefore encouraged builders to raise their floors. Additional modifications included using mortar instead of mud, improving thatched roofs with wire mesh, or including movable slats on roofs to allow heat to escape during hot and humid seasons.

Thatched-roof housing, Nias Island, west of Sumatera, Indonesia

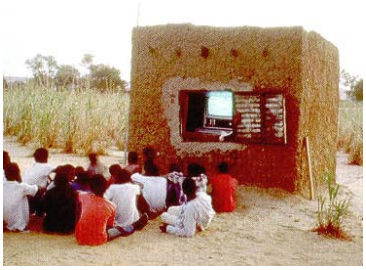
In the case of **modernized-traditional** house types, the modifications are more far-reaching, involving not only building materials, but also the floor plan and general layout. In the United States, several types of traditional houses of European cultural origin can be identified: most notably the New England, Middle Atlantic, and Southern styles. The **New England** [A] house still has wood-frame construction, but most modern versions have added elements like multiple bathrooms, two-car garages, or interior specialization. The New England style house dates back to colonial times and became gradually more elaborate over time. The construction depicted below is called the "saltbox" house and evolved from the need to conserve space (hence the flat face), and also allow for snow to fall away from the streets in the winter months (hence the unevenly shaped roof).

Saltbox House, New England, USA

The **Middle Atlantic** [B] style originated as a one-room log cabin with a stone chimney and fireplace at one end. Later, additional rooms, a porch, and a second floor were added. Traditional **Southern** [C] dwellings had only one story (sometimes with a small attic room) and a porch. Often the house was built on a raised platform to reduce interior heat, or a raised stone foundation to guard against flooding.



From thatched-roof huts to stone-constructed homes, modernized-traditional dwellings take on many forms throughout the world.



From the top left: a thatched-roof hut, Ireland (a good roof can last over 30 years); a Montreal House, Quebec (made of stone and brick); a solar-powered T.V. hut, Niger (constructed out of a food-storage hut)

The **modern** house type is most common in the United States but is increasingly common elsewhere as well. This category reflects advanced technology, upward mobility, practicality, comfort, and hygiene – as well as large-scale suburbanization in many cases. Although truly lacking in the depth of variety of other dwellings around the world, many would say the modern American house makes up in technology for what it lacks in style. These homes tend to sacrifice tradition for practicality and efficiency. Modern house types in Tokyo, Sydney, São Paolo, and Vancouver, are far more similar to each other than to the traditional houses in and around these cities.

Modern American home, Fort Lauderdale, Florida

Settlement Patterns

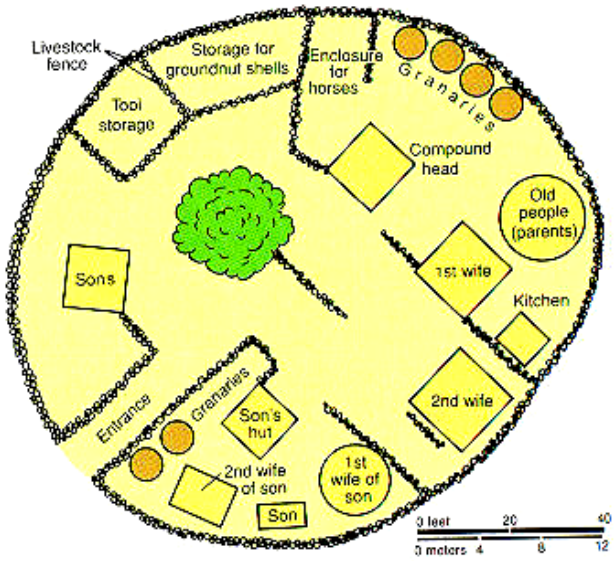
We now turn our attention from individual dwellings to **settlements** – purposely grouped, organized clusters of houses and nonresidential buildings. The smallest such clusters are known as **hamlets** and may contain only about a dozen buildings. Larger rural settlements are **villages**, but it is difficult to clearly define a village in terms of numbers. In Canada, the official definition of a village limits it to 1,000 people; in the U.S., the limit is 2,500; in India, it is up to 5,000; and in Japan a settlement cannot be called "urban" until it has 30,000 inhabitants.

Since numbers alone are not particularly revealing, a village has traditionally been defined as a settlement in which the majority of the population was involved in primary activities. Relatively few people had narrow, specialized jobs; instead most of them did a variety of things to keep themselves and the community going. In the industrialized regions, the distinctions between rural and urban are becoming increasingly blurred as people commute from village to town or city to work.

The form or layout of rural villages reflect historical circumstances, the nature of the land, and economic conditions. Some villages take on **linear** characteristics, such as houses in Japanese farming villages that are so tightly packed together that only the narrowest passageways remain between them. This reflects the need to allocate every possible square foot of land for farming. In many low-lying areas of Western Europe (e.g., Benelux), villages are located on dikes and levees. *Strassendorfs* are linear villages lined up along a road.

Diagram of a linear strassendorf in Germany

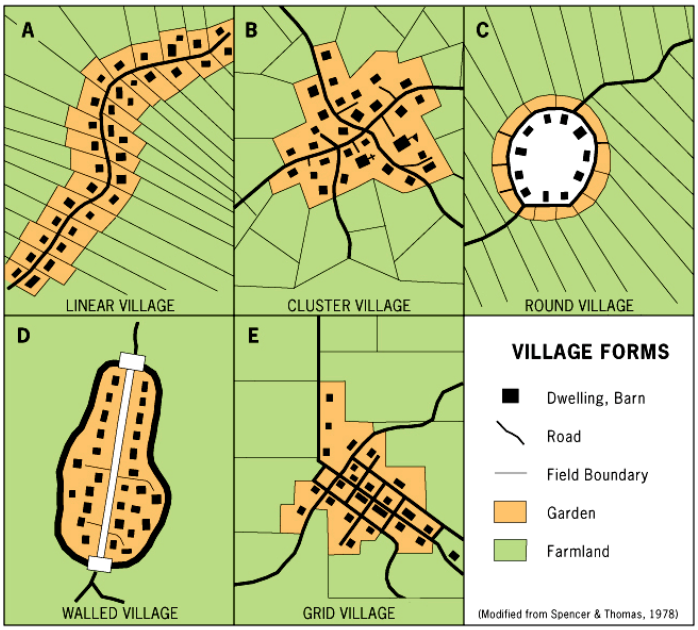
Some villages may take on the character of a **cluster**. It may have begun as a small hamlet at the intersection of two roads and then developed by accretion (agglomeration). The **round village**, or *rundling*, is the European version of the East African circular village, with its central cattle corral, or *kraal*. This layout evolved out of a need for a safe haven for livestock at night, and was first used in Europe by Slavic farmer-herdsmen.



Extended family compound of the Bambara of Mali

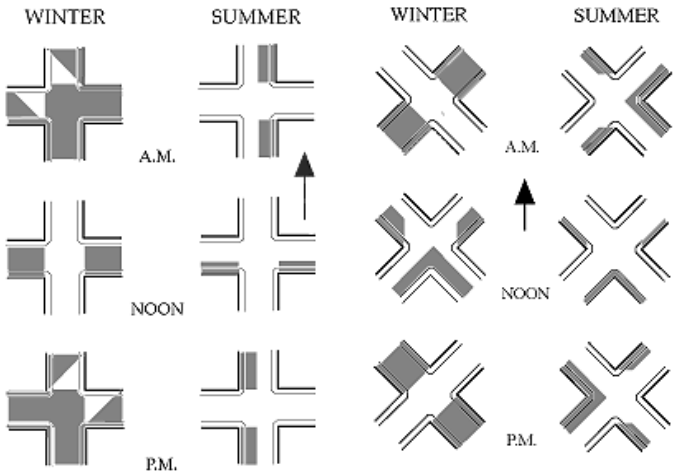
Early villages had to be near a reliable water supply, be defensible, and have sufficient land nearby for cultivation to name but a few concerns. Many farm villages were **walled**, or fortified, to protect their inhabitants against marauders. The first farmers in the Fertile Crescent, for example, faced attacks from the horsemen of Asia's steppes. When the population became so large that people

had to build houses outside the original wall, a new wall would be built to protect them as well.

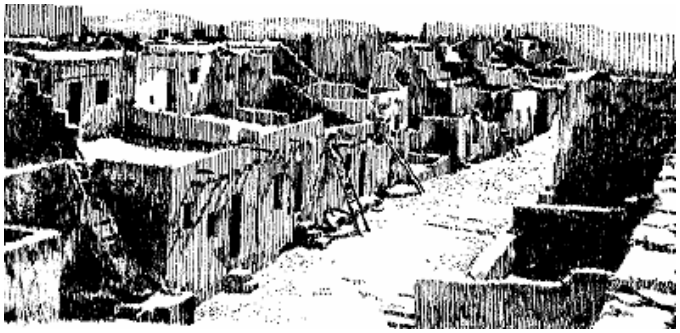


More modern villages, notably planned rural settlements, may be arranged on a **grid** pattern. The United States passed the **township and range system** into law back in 1785; designed to facilitate the dispersal of settlers evenly across farmlands of the U.S. "frontier." This is usually associated with Thomas Jefferson's idea of democracy and belief that the scattered farmers were more independent than those living in villages. The basic unit was the 1 square mile section, and since the borders were drawn without reference to the terrain, they imposed a remarkable uniformity across the land. Fly across the heartland of the United States today and you will see below a vast checkerboard, with fields and roads and cities laid out in a precise north-south, east-west arrangement.

This is however, not a 20th century novelty. The Spanish invaders of Middle America laid out grid villages and towns starting in the 16th century, as did other colonial powers elsewhere in the world. An interesting difference between the two systems was that the old Spanish grid was diagonally aligned as an adaptation to sea breezes. This alignment also had a seasonal component to it.



Shadow patterns in streets laid out on the U.S. township-and-range system show that streets bearing east-west are likely to be particularly uncomfortable: dark and cold in winter, bright and hot in summer. Shadow patterns in streets laid out on the diagonal Spanish grid show that all streets have some winter sun and summer shade, making them generally more comfortable than streets laid out today by the U.S. township-and-range system. The sun's low winter rays struck most directly on the **adobes'** (sun-dried brick buildings) thick masonry walls where energy was stored during the day, then released to warm inside spaces throughout the cold night. In summer, the sun passed high overhead and struck most directly on the roofs and terraces where the sun's energy was less effectively stored and transferred.



A careful examination of the rural settlement of a region reveals much about the culture, its history and traditions. The modern comforts of a farm village in the U.S., with its paved streets, electricity, water supply, and other amenities, are a far cry from the dusty, isolated, poverty-ridden village of eastern India. Villages may be viewed as lying along a continuum from the most communal (multiple-family "long-house" Asian and Pacific communities) to the most individualistic (affluent villages of North America). Between these extremes are other examples like the agrarian communal kibbutzim of Israel, or the looser clusters in rural Europe. In China alone, some 800 million people (in a country of over 1.3 billion) inhabit villages and hamlets. In India, with a population over 1 billion, three out of four people live in villages. The rural world is truly an integral part of the modern world.