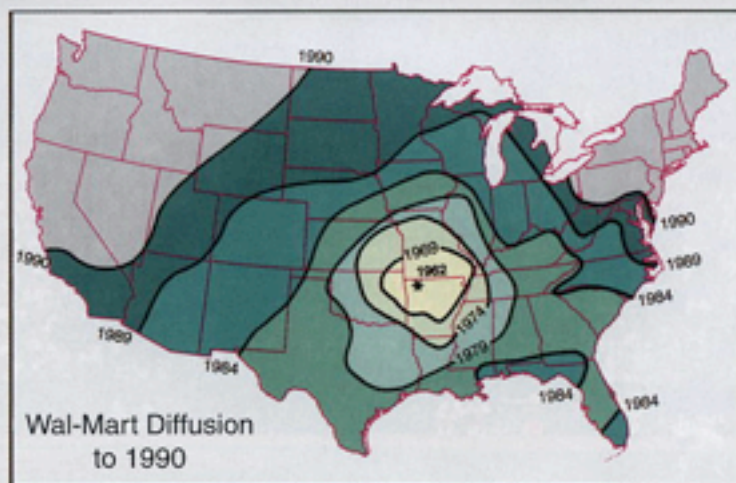




Documenting Diffusion

The places of origin of many ideas, items, and technologies important in contemporary cultures are only dimly known or supposed, and their routes of diffusion are speculative at best. Gunpowder, printing, and spaghetti are presumed to be the products of Chinese inventiveness; the lateen sail has been traced to the Near Eastern culture world. The moldboard plow is ascribed to 6th-century Slavs of north-eastern Europe. The sequence and routes of the diffusion of these innovations has not been documented.

In other cases, such documentation exists, and the process of diffusion is open to analysis. Clearly marked is the diffusion path of the custom of smoking tobacco, a practice that originated among Amerindians. Sir Walter Raleigh's Virginia colonists, returning home in 1586, introduced smoking in English court circles, and the habit very quickly spread among the general populace. England became the source region of the new custom for northern Europe; smoking was introduced to Holland by English medical students in 1590. Dutch and English together spread the habit by sea to the Baltic and Scandinavian areas and overland through Germany to Russia. The innovation continued its eastward diffusion, and within a hundred years tobacco had spread across Siberia and was, in the 1740s, reintroduced to the



Source: Map based on data from Thomas O. Graff and Dub Ashton, "Spatial Diffusion of Wal-Mart: Contagious and Reverse Hierarchical Elements." *Professional Geographer* 46, no. 1 (1994): 19-29.

American continent at Alaska by Russian fur traders. A second route of diffusion for tobacco smoking can be traced from Spain, where the custom was introduced in 1558, and from which it spread more slowly through the Mediterranean area into Africa, the Near East, and Southeast Asia.

In more recent times, hybrid corn was first adopted by imaginative farmers of northern Illinois and eastern Iowa in the mid-1930s. By the late 1930s and early 1940s, the new seeds were being planted as far east as Ohio and north to Minnesota, Wisconsin, and northern Michigan. By the late 1940s, all

commercial corn-growing districts of the United States and southern Canada were cultivating hybrid corn varieties.

A similar pattern of diffusion marked the expansion of the Wal-Mart stores chain. From its origin in northwest Arkansas in 1962, the discount chain had dispersed throughout the United States by the 1990s to become the country's largest retailer in sales volume. In its expansion, Wal-Mart displayed a "reverse hierarchical" diffusion, initially spreading by way of small towns before opening its first stores in larger cities and metropolitan areas (see map).