3 Intelligent Interiors

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The focus of interior design has shifted, over the centuries, as successive waves of technological innovation have taken effect. In the preindustrial era buildings consisted essentially of supporting skeletons and enclosing skins; interior design was mostly a matter of structure and spatial organization. With the Industrial Revolution, buildings acquired sophisticated mechanical and electrical systems—in effect, artificial physiologies; interior designers were increasingly concerned with selecting and procuring specialized equipment and with configuring machine-powered systems to support specific activities. The early modernist architect Le Corbusier summarized this new condition, and the attitude he took to it, by describing a house polemically as a "machine for living in."[1] Now, in the twenty-first century, inexpensive microelectronics, software, and increasingly pervasive digital networks are ushering in the age of intelligent interiors.

Twenty-first-century buildings are acquiring artificial nervous systems. Electronics and software are becoming important elements of interior design solutions. And designers can now think of rooms as "robots for interacting with."

PREINDUSTRIAL INTERIORS: STRUCTURE AND SPACE

To put the emerging capabilities of intelligent interiors in perspective, let us begin by considering a typical preindustrial building—the elementary habitation of an agricultural worker shown, in its now ruined and abandoned state, in Figure 3-1. It consists of a single rectangular space with doors at either end and windows on opposite sides. Its basic function was, simply, shelter. The stone walls and the corrugated iron roof provided protection