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days as an agricultural center in 6,000 B.C. through its cultural zenith in the second millennium B.C. to its last days as a religious cult site in the fourth century B.C. Situated on the shore of the Persian Gulf, Ur was for centuries the center of a far-flung empire. A succession of Sumerian, Babylonian, and other rulers traded agricultural products for precious metal and stone (used for magnificent crafts), encouraged widespread literacy, and employed women and slaves in a "cold-bloodedly businesslike" weaving industry. In this revision of Woolley's original *Excavations at Ur* (1954), Moorey, also an archaeologist, tempers Woolley's vivid imagination and strong Biblical bias, but preserves the flavor of his mentor's prose. "Our object," Woolley averred, "was to get history, not to fill museum cases." His historical account remains largely unchallenged to this day.

**GRAMMATICAL MAN:
Information, Entropy,
Language, and Life**
by Jeremy Campbell
Simon & Schuster, 1982
319 pp. \$15.95

Working in 1948 to solve a problem of sending radio and telephone messages, Bell Laboratory engineer Claude Shannon hit upon the central insight of information theory: Systems—including the physical universe, biology, human languages—are limited and defined by innate codes or "grammars." Furthermore, these codes (such as DNA in biology) account for progressive changes within their systems. With mathematical theorems, Shannon demonstrated that codes correct random change and lead to reliable information in an often unreliable world. Offering a full history and lucid explanation of this theory, Campbell, an English journalist, also shows how its principles have been supported and developed by work in several disciplines. Information theory conforms, for example, to Jung's proposition that dreams are messages from the archetypes of the unconscious to the conscious, ever-developing mind. Information is present throughout the universe; therefore, Campbell concludes, the universe must tend toward order and complexity, not, as the theory of entropy proposes, toward disorder or randomness.