scientist, publishing mainly on chemistry and mineralogy.

Ewing makes a slender case that Smithson saw in the American and French revolutions the promise of a fresh, utopian future—until the blood began to flow in Paris, leaving the United States the sole unblemished example of a new society, free of the snobbery and condescension of the old. Upon his death in 1829, he bequeathed a good living to his nephew and the bulk of his fortune to that nephew's issue. When the nephew died, childless, in 1835, a proviso in Smithson's will sent roughly £100,000 (about $510,000) "to the United States of America, to found at Washington, under the name of the Smithsonian Institution, an establishment for the increase & diffusion of knowledge among men."

Some proud Americans declared that their country should refuse this Old World largesse. When the money finally did reach Washington, bickering ensued over what sort of establishment it should support. Not until 1846 did Congress charter the Smithsonian; the cornerstone of its castle home, which symbolizes the institution to this day, was laid the following year.

If Ewing can't turn Smithson into a substantial character or explain precisely why he left his famous legacy, she is nonetheless persuasive that the bequest wasn't merely whimsical, as popular legend sometimes has it. Smithson was a true scientific enthusiast, and something of an idealist. He would be happy with the institution that bears his name.

—***David Lindley***

Making Sense of It All

GLUT:
Mastering Information Through the Ages.
By Alex Wright. Joseph Henry Press. 296 pp. $27.95

To the modern mind, the verb "compute" signifies a murky electronic process—blinking lights, the hum of a processor, possibly the scrolling of digits across a screen. But before the 20th century the word had a very different connotation, namely, to count, reckon, or impose order on information. Alex Wright, an information architect and former Harvard librarian, argues that we've outsourced so much processing, storing, and retrieving of information to machines that we've come to see information technologies as mysterious, thoroughly modern innovations. In *Glut,* he sets out to show that if we resist the tendency of the technorati to look only into the future, we can see that we've been in an information age of sorts all along.

Inventions such as Sumerian tablet writing in the third millennium BC and the Phoenician alphabet in approximately the 10th century BC testify to humankind's innate ability to organize data. The original purpose of the familial order of the Greek Pantheon (Cronus begat Zeus, who begat Athena) was not to imbue stories with familial drama but to help orators recall the sequential details of their epics. Exotic accounting tools such as the Incan quipu—long pieces of intricately knotted rope—were once thought to be simple ledgers; new evidence suggests that they served as historical chronicles as well, and perhaps even stored gossip.

Wright, an information systems theorist, holds that all social schemes—from bee colonies to stock exchanges—share certain observable characteristics in how they create and disseminate data. Such systems branch from a single source (a hierarchy) or bubble up spontaneously (a network). A hierarchy involves individual elements grouped into categories that, in turn, fall into broader categories. Aristotle's taxonomy of flora and fauna, which classified animals according to their medium of locomotion (i.e., water, air, land), is the quintessential hierarchy. A computer pull-down menu is another example. Networks, on the other hand, follow no single pattern. French philosopher Denis Diderot's 18th-century *Encyclopédie* featured the writings of Voltaire and Rousseau alongside bits

of colloquial knowledge and folk histories.

In the eyes of Internet age utopians—those who herald our digital future with nearly religious fervor—hierarchies are old-guard systems that naturally reinforce a particular worldview or bias, and are doomed to extinction by the democratic, malleable networks that are replacing them. But this is an oversimplification, Wright says. While there is a "fundamental tension" between the two kinds of information systems, they "not only coexist, but they are continually giving rise to each other." Wikipedia, a vast online encyclopedia that accepts and posts entries by virtually anyone, has been forced to institute a supplemental system of hierarchical controls to govern the activities of its contributors.

The current growth of network activity across the Internet—which is also provoking shakeups in the organizational charts of companies and even in the military's traditional command-and-control authority structures—doesn't spell the end of hierarchical institutions, Wright concludes, nor are the tremendous technological shifts we're witnessing unprecedented. History has seen "information explosions" as far back as the Ice Age, when our ancestors began using symbols.

Wright the information architect is less interesting than Wright the historian. He tends to oversimplify in order to impose his universal organizing theory on the entirety of human history. But his book does succeed beautifully as a museum in which various artifacts reveal how humankind has used wit, reason, and imagination to store and compute data. Nothing, in fact, could be more human.

—*Patrick Tucker*

RELIGION & PHILOSOPHY

Call Letters for Jesus

AIMEE SEMPLE MCPHERSON AND THE RESURRECTION OF CHRISTIAN AMERICA.

By Matthew Avery Sutton. Harvard Univ. Press. 351 pp. $26.95

THE CONTEMPORARY HOLY alliance between evangelism, the media, and politics has roots that are many decades old. Long before Pat Robertson or Billy Graham, there was Aimee Semple McPherson (1890–1944), a self-educated minister mostly

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