

Editorial

Leslie A. White, a noted anthropologist, who for many years was a faculty member at the University of Michigan, believed that the ability to harness energy could be taken as a measure of the character of a human culture. Generally speaking, the more energy used, the more complex, the richer, and, perhaps, the more advanced the culture. Today one often hears of economies, and by a short extension of cultures, described as post-industrial or of the information-age, but the underlying dependence on energy has not disappeared. A large and increasing fraction of worldwide energy expenditures powers the revolutionary force of the internet.

The scholarly community - mainly scientists with support from various defense agencies - has been both a driving force and principal benefactor of the development of the net. From the scholar's standpoint, the enterprise has been an astonishing boon, one so powerful and compelling that card catalogs and perhaps library stacks may soon take their places along side rotary telephones and buggy whips. Even today, college students know little of the pleasures or the frustrations of the old style of scholarship: the setting aside hours or days for trolling the physical shelves of an actual library; the inhalation of the dust of disuse and of the comforting quiet that comes with consideration for other readers; and for the many pleasurable surprises that the accidents of alphabetization or Dewey decimalization make neighbors on the shelves. Instead, in scarcely as much time as it once took to read the map of library labyrinths (or to realize that the reference librarian goes home at 4:00 pm), we now summon uncomplaining and unsleeping genies, with names that evoke fantasy, whimsy, and mythology - SciFinder, Lexus/Nexus, Lycos. We rub the lamp engraved with the magical characters <http://> and claim our wishes. "Google," we demand, "who was Leslie A. White and what did he think about?" And in less than a second the genie returns having searched vast archives and accomplished unimaginable feats of collation.

But in the end, the genies, like the rest of us, require energy and obey the laws of thermodynamics. The evanescent stuff of information carries a price tag that can be measured partly in watts, which is to say in oil from the shrinking pools in Arabia and Venezuela and Russia and Alaska, with all the geopolitical consequences that the importation entails. For the individual scholar, the new ways of finding things out are so much faster and more efficient that the idea of going back to the old ones is almost unthinkable. So, as scholars and while the energy party lasts, we celebrate our good fortune that the engines of commerce and the exigencies of security support the net and incidentally make the Rutgers Scholar available at what is likely a small fraction of its true cost.

A quick look at the "article" by Ritter et al. will show one way that the Rutgers Scholar and other journals like it make good use of the cultural investment of energy. Other work described in this year's issue may eventually help us support our information habit - e.g., the search of Capozzi and Xu for new, inexpensive materials for batteries that could go into laptop computers. The several works described in this issue have many other useful aspects, mostly unpredictable and longer term but real enough, and they reflect favorably our culture's progress and our ability to harness energy.

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