How Distance Is Dying

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The world economy is in the midst of a revolution as profound as the Industrial Revolution that began in about 1760. The causes of this revolution are advances in information and communications technologies that have occurred since the early 1980s. Frances Cairncross, a journalist with the Economist, has closely followed these changes. In The Death of Distance (Harvard Business School Press, $24.95), she argues that low-cost communication makes distance irrelevant and then speculates on how this will affect business, government, and culture in the near future. A few of her conclusions: more businesses will become like Hollywood studios, pulling together individuals and companies for one-time projects; increasingly mobile companies will locate production where taxes are low; and governments will find it increasingly difficult to censor what their citizens see and hear.

Consider the telephone. In 1956, when the first transatlantic telephone cable went online, says Cairncross, it could handle only 89 simultaneous telephone conversations between Europe and North America. Not surprisingly, this scarcity led to high prices: at first, a three-minute telephone call between New York and London cost just over $50 in 1990 dollars. But the introduction of fiber optics changed all that. The first transatlantic fiber-optic cable, with capacity for about 40,000 simultaneous conversations, went online in 1988; cables that are laid in the next few years will carry more than three million conversations on a few strands of fiber no wider than a human hair. With such huge capacity, prices have fallen dramatically. Today that three-minute call from New York to London costs peanuts (see chart) and gives you a clearer conversation. No wonder Cairncross calls fiber-optic cables the 'oil pipelines of the information economy.'

Similarly, the collapse in the cost of computing has made cellular communication economically viable. Worldwide, one in two new phone subscriptions is cellular. The digital revolution in telephony is most advanced in poorer countries because they have been able to skip an outdated technological step. In 1994, 83% of subscriber lines in Mexico and 100% in Chile were connected to digital exchanges, vs. only 72% in Japan, the most digitized of the rich countries.

The other major improvement in technology is the Internet, which has revolutionized the transmission of data. Competition from the Internet, as well as competition among long-distance providers, will help drive the cost of phone calls almost to zero, Cairncross concludes. Calling from Hollywood to London will eventually cost no more than a call to nearby Beverly Hills.

Plummeting communications costs will also revolutionize the way business is done, she argues. Lower communications costs lead to lower transaction costs, which, as Nobel laureate Ronald Coase has pointed out, reduce the optimal size of firms. Since 1970 the average number of employees in U.S. firms has dropped by a fifth. Another result of lower transaction costs will be 'temporary' companies that get together to carry out one-time projects.

Here's one striking number: America's industrial output weighs about the same as it did a century ago, even though real GDP is 20 times higher. This reflects the increasing knowledge content of goods and services. This lighter output, combined with dramatic reductions in transportation costs, means that producing close to your customers is no longer crucial. Capital and high-income workers, therefore, will be increasingly footloose, locating where corporate taxes and tax rates on high-income people are low. Governments will have to compete for high-income citizens. We are already seeing this. The top tax rates on personal income in almost all major countries, and even in minor ones, are much lower now than they were in the late 1970s.

Similarly, the explosive growth of the Internet will make it difficult for governments to censor what their citizens read and see on the Web. Even if future U.S. censorship laws survive a constitutional challenge, providers of censored material can shift to locations not under the U.S. government's control. Although Cairncross seems strangely ambivalent about the value of free speech, her ambivalence doesn't matter. Speech will be freer.

Cairncross is a generally perceptive observer of economic trends, but she has one main blind spot: she sees government as the antidote to monopoly rather than its cause. In fact, the main threat to the rosy scenario for the death of distance is governments that preserve monopoly by hampering competition.