

43, an office manager at Wallpaper Warehouse in Natick, Massachusetts, are wary of the digital age. "I really don't mind that the rest of the world passes me by as long as I can still earn a living," she says.

These aging choose-nots become a more serious issue when they are teachers in schools. Even if schools manage to acquire state-of-the-art equipment, there is no guarantee that trained adults will be available to understand them. This is something that tries Aaron Smith's patience. "A lot of my teachers are quite illiterate," says Aaron, the fully equipped Issaquia teenager. "You have to explain it to them real slow to make sure they understand everything." Fast or slow, Marilee Colon, Roxbury's fifth-grade computer lover, would like her chance to understand everything too.

Questions for Discussion and Writing

1. According to Hancock, although publicized as a democratizing tool, the computer has dramatically separated the haves from the have-nots. What factors determine who has access to this technology?
2. How does Hancock's comparison of schoolchildren dramatize her thesis? Why is she critical of articles that expound on the glories of computer literacy?
3. In your experience, have computers had the kind of democratizing effect that was promised? Why or why not?

Constance Holden

Constance Holden (b. 1941) is a writer for *Science* magazine, whose column "News and Comment" discusses the implications of issues in the forefront of scientific research. Holden is particularly interested in questions about the relationship between mind and body. "Identical Twins Reared Apart," from *Science* (March 1980), reports on a comparative study, conducted by Thomas J. Bouchard at the University of Minnesota, which pointed to the importance of heredity rather than environment in shaping human behavior. Holden develops a point-by-point comparison of the striking similarities in behavior between nine sets of identical twins who were separated at birth, reared in different environments, and then brought together.

IDENTICAL TWINS REARED APART

Bridget and Dorothy are 39-year-old British housewives, identical twins raised apart who first met each other a little over a year ago. When they met, to take part in Thomas Bouchard's twin study at the University of Minnesota, the manicured hands of each bore seven rings. Each also wore two bracelets on one wrist and a watch and a bracelet on the other. Investigators in Bouchard's study, the most extensive investigation ever made of identical twins reared apart, are still bewitched by the seven rings. Was it coincidence, the result of similar influences, or is this small sign of affinity a true, even inevitable, manifestation of the mysterious and infinitely complex interaction of the genes the two women have in common?

Investigators have been puzzled by the similarities between long-separated twins. Some would ordinarily attribute the similarities to a common genetic inheritance, for example, that two men with authoritarian personalities both suffer from depression? Or still another possibility?

These are only bits and pieces of the puzzle being collected by the University of Minnesota. The study has been provocative have been some controversy in the press, and the study is controversial, aimed, as it is, at the nature versus environment. Identical twins, notably in three studies, have provided an indication of the sensitivity of the study. The study was completed more than 10 years ago. This type of research rather than the usual type of research is able to locate more twin pairs of identical or monozygotic twins used as controls) and locate 11 additional pairs.

The Minnesota study was conducted by psychiatrists, and medical records of the twins' life histories, including their education, abilities, and intelligence, are being analyzed in investigating the twins' life histories, both coincidentally and by design. Bouchard is now 39. Bouchard is a hotbed of twin studies. Bouchard is a behavioral geneticist. Bouchard's particular interest is the environment. Bouchard has been looking at the brain. Bouchard who recently completed a study of identical and psychiatrist Leonard Bouchard's adopted children.

Bouchard has taken a study of identical twins through which the twins are raised apart. In addition to detailed medical records, the twins are given electrocardiograms, electroencephalograms. They are injected with a radioactive substance. They are given electroencephalograms of varying intensities of responses as reaction times.

A. H. Newman, F. N. Freeman, and others. *Twins: A Study of Heredity and Environment*.