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- 1. Five Things We Need to Know about Technological Change**, Neil Postman, *New Tech '98 Conference*, March 27, 1998
Postman suggests that computer technology is too important to be left entirely to the technologists. "Embedded in every technology," he says, "is a powerful idea. . . ." **3**
- 2. Moore's Law and Technological Determinism: Reflections on the History of Technology**, Paul E. Ceruzzi, *Technology and Culture*, July 2005
"The steady and unstoppable march of semiconductor density" leads this writer to make the unfashionable claim that "in at least one instance, raw technological determinism is at work." **7**
- 3. A Passion for Objects**, Sherry Turkle, *The Chronicle of Higher Education*, May 30, 2008
Science, like every human endeavor these days, is suffused with computers. Turns out that computers with their now-an-object, now-not-an-object shape shifting might not be what young minds drawn to science need. **12**



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- 6. Click Trajectories: End-to-End Analysis of the Spam Value Chain**, Kirill Levchenko, et al., *IEEE Symposium on Security and Privacy*, 2011
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8. **Computer Software Engineers and Computer Programmers**, *Occupational Outlook Handbook*, Bureau of Labor Statistics, 2010–2011
“Computer software engineers are one of the occupations projected to grow the fastest and add the most new jobs over the 2008–18 decade,” this despite years of worry that high-tech jobs are being shipped abroad.

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9. **Computer Scientists**, *Occupational Outlook Handbook*, Bureau of Labor Statistics, 2010–2011
Computer scientists do research into all aspects of computing, from chip design to robotics to virtual reality. In the process, they “are the designers, creators, and inventors of new technology.” According to the BLS, “job prospects should be excellent.”

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10. **Women, Mathematics, and Computing**, Paul De Palma, *Encyclopedia of Gender and Information Technology*, 2006
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12. **The End of Solitude**, William Deresiewicz, *The Chronicle Review*, January 30, 2009
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13. **Relationships, Community, and Identity in the New Virtual Society**, Arnold Brown, *The Futurist*, March/April, 2011
“Facilitating and managing relationships online is projected to become close to a billion-dollar industry in the United States in 2011.” Providing services to commercialized communities “will be a great growth industry.”

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14. **Generational Myth: Not All Young People Are Tech-Savvy**, Siva Vaidhyanathan, *The Chronicle of Higher Education*, September 19, 2008
We hear lots about so-called **digital natives**, those born, roughly, since 1980. The author claims that they don’t have much in common. In particular, not all of them are technical wizards.

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15. **Expressing My Inner Gnome: Appearance and Behavior in Virtual Worlds**, Shyong (Tony) K. Lam and John Riedl, *IEEE Computer*, July 2011
“Griefers,” online game characters with a propensity for attacking other players, seem to enjoy causing pain. Avatars in virtual worlds reproduce cultural behaviors found in the real world. As the French say, “*plus ça change*. . . .”

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19. Degrees, Distance, and Dollars , Marina Krakovsky, <i>Communications of the ACM</i> , September 2010 The University of Phoenix, a pioneer in online education, has 445,600 students. The ten campuses of the University of California enroll about 220,000. This article explores the educational and economic dynamics of online education.	103
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- 25. Untangling Attribution: Moving to Accountability in Cyberspace**, Robert K. Knake, Testimony before the House Subcommittee on Technology and Innovation, Committee on Science and Technology, July 15, 2010
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- 26. Hacking the Lights Out**, David M. Nicol, *Scientific American*, July 2011
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- 27. The Web's New Gold Mine: Your Secrets**, Julia Angwin, *The Wall Street Journal*, July 31–August 1, 2010
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- 28. The BP Oil Spill: Could Software Be a Culprit?**, Don Shafer and Phillip A. Laplante, *ITProfessional* of the IEEE Computer Society, August 19, 2010
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- 29. The Conundrum of Visibility: Youth Safety and the Internet**, Danah Boyd and Alice Marwick, *Journal of Children & Media*, 2009
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- 32. Does Facebook Have a Foreign Policy?**, Tim Wu, *Foreign Policy*, October 20, 2010
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- 33. A Fantasy World Is Creating Problems in South Korea**, Choe Sang-Hun, *The New York Times*, May 26, 2010
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39. Weighing Watson’s Impact , Kirk L. Kroeker, <i>Communications of the ACM</i> , July 2011 IBM’s Watson recently defeated <i>Jeopardy!</i> ’s two most successful contestants. Was this just (!) engineering or did Watson’s triumph represent a leap forward in language understanding and machine learning?	181
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