have grown up with print technologies and Internet technologies as part of how you have always read. With Carr's essay in mind, write an account of how you read, focusing on the roles print reading and Internet reading each play in how you engage information.

2. Is, as Carr reports Google's view, information a kind of commodity? Why or why not? Write an article about whether or not information is a commodity and how it is or is not commoditized.

3. Carr quotes Nietzsche as claiming that "our writing equipment takes part in the forming of our thoughts." Do you agree with this claim? Write an essay that considers the relationship between writing technologies—like typewriters, pens, smart

phones, word processors—and how people think when they write. Keep in mind, too, Carr's discussion of Plato's reaction against writing in *Phaedrus*.

4. As you might imagine, the debate regarding the value of Internet technologies and their effects on how we think, read, work, and live are far ranging. Using the social news website Digg, conduct some research to find out how the Internet's effects on cognition and similarly related processes—like reading—have been addressed in the media over the last year. Don't limit your search to just written text; consider how new media productions and Web 2.0 texts have also taken up this conversation. Write an assessment of what you find in your research.

Does the Internet Make You Smarter?

Clay Shirky

Clay Shirky has been a theater director, a professor, a consultant, and a designer. He teaches in the Interactive Telecommunications Program at New York University and was the first Professor of New Media Studies at Hunter College, where he created the college's first undergraduate and graduate programs in new media. As a consultant, he has worked with groups addressing network design, including Nokia, the BBC, Newscorp, Microsoft, BP, Global Business Network, the Library of Congress, the U.S. Navy, the Libyan government, and Lego. He is also a prolific writer whose articles, essays, books, and blogs consider the interaction between social networks and technological networks.

The essay reprinted here, "Does the Internet Make You Smarter?" was first published in *The Wall Street Journal* in the summer of 2010. The essay makes a claim for the

importance of the evolution of digital information technologies, but at the same time it acknowledges that like other technological advances, digital technologies will also provide an abundance of less-than-useful artifacts. As you read "Does the Internet Make You Smarter?" consider how Shirky represents the idea of technology in a situation that is often resistant to technological development.

Digital media have made creating and disseminating text, sound, and images cheap, easy and global. The bulk of publicly available media is now created by people who understand little of the professional standards and practices for media.

Instead, these amateurs produce endless streams of mediocrity, eroding cultural norms about quality and acceptability, and leading to increasingly alarmed predictions of incipient chaos and intellectual collapse.

But of course, that's what always happens. Every increase in freedom to create or consume media, from paperback books to YouTube, alarms people accustomed to the restrictions of the old system, convincing them that the new media will make young people stupid. This fear dates back to at least the invention of movable type.

As Gutenberg's press spread through Europe, the Bible was translated into local languages, enabling direct

encounters with the text; this was accompanied by a flood of contemporary literature, most of it mediocre. Vulgar versions of the Bible and distracting secular writings fueled religious unrest and civic confusion, leading to claims that the printing press, if not controlled, would lead to chaos and the dismemberment of European intellectual life.

These claims were, of course, correct. Print fueled the Protestant Reformation, which did indeed destroy the Church's pan-European hold on intellectual life. What the 16th-century foes of print didn't imagine—couldn't imagine—was what followed: We built new norms around newly abundant and contemporary literature. Novels, newspapers, scientific journals, the separation of fiction and non-fiction, all of these innovations were created during the collapse of the scribal system, and all had the effect of increasing, rather than decreasing, the intellectual range and output of society.

To take a famous example, the essential insight of the scientific revolution was peer review, the idea that science was a collaborative effort that included the feedback and participation of others. Peer review was a cultural institution that took the printing press for granted as a means of distributing research quickly and widely, but added the kind of cultural constraints that made it valuable.

We are living through a similar explosion of publishing capability today, where digital media link over a billion people into the same network. This linking together in turn lets us tap our cognitive surplus, the trillion hours a year of free time the educated population of the planet has to spend doing things they care about. In the 20th century, the bulk of that time was spent watching television, but our cognitive surplus is so enormous that diverting even a tiny fraction of time from consumption to participation can create enormous positive effects.

Wikipedia took the idea of peer review and applied it to volunteers on a global scale, becoming the most important English reference work in less than 10 years. Yet the cumulative time devoted to creating Wikipedia, something like 100 million hours of human thought, is expended by Americans every weekend, just watching ads. It only takes a fractional shift in the direction of participation to create remarkable new educational resources.

Similarly, open source software, created without managerial control of the workers or ownership of the product, has been critical to the spread of the Web. Searches for everything from supernovae to prime numbers now happen as giant, distributed efforts. Ushahidi, the Kenyan crisis mapping tool invented in 2008, now aggregates citizen reports about crises the world over. PatientsLikeMe, a website designed to accelerate medical research by getting patients to publicly share their health information, has assembled a larger group of sufferers of Lou Gehrig's disease than any pharmaceutical agency in history, by appealing to the shared sense of seeking medical progress.

Of course, not everything people care about is a high-minded project. Whenever media become more abundant, average quality falls quickly, while new institutional models for quality arise slowly. Today we have *The World's Funniest Home Videos* running 24/7 on YouTube, while the potentially world-changing uses of cognitive surplus are still early and special cases.

That always happens too. In the history of print, we got erotic novels 100 years before we got scientific journals, and complaints about distraction have been rampant; no less a beneficiary of the printing press than Martin Luther complained, "The multitude of books is a great evil. There is no measure of limit to this fever for writing." Edgar Allan Poe, writing during another surge in publishing, concluded, "The enormous multiplication of books in every branch of knowledge is one of the greatest evils of this age; since it presents one of the most serious obstacles to the acquisition of correct information."

The response to distraction, then as now, was social structure. Reading is an unnatural act; we are no more evolved to read books than we are to use computers. Literate societies become literate by investing extraordinary resources, every year, training children to read. Now it's our turn to figure out what response we need to shape our use of digital tools.

The case for digitally-driven stupidity assumes we'll fail to integrate digital freedoms into society as well as we integrated literacy. This assumption in turn rests on three beliefs: that the recent past was a glorious and irreplaceable high-water mark of intellectual attainment; that the present is only characterized by the silly stuff

and not by the noble experiments; and that this generation of young people will fail to invent cultural norms that do for the Internet's abundance what the intellectuals of the 17th century did for print culture. There are likewise three reasons to think that the Internet will fuel the intellectual achievements of 21st-century society.

First, the rosy past of the pessimists was not, on closer examination, so rosy. The decade the pessimists want to return us to is the 1980s, the last period before society had any significant digital freedoms. Despite frequent genuflection to European novels, we actually spent a lot more time watching "Diff'rent Strokes" than reading Proust, prior to the Internet's spread. The Net, in fact, restores reading and writing as central activities in our culture.

The present is, as noted, characterized by lots of throwaway cultural artifacts, but the nice thing about throwaway material is that it gets thrown away. This issue isn't whether there's lots of dumb stuff online—there is, just as there is lots of dumb stuff in bookstores. The issue is whether there are any ideas so good today that they will survive into the future. Several early uses of our cognitive surplus, like open source software, look like they will pass that test.

The past was not as golden, nor is the present as tawdry, as the pessimists suggest, but the only thing really worth arguing about is the future. It is our misfortune, as a historical generation, to live through the largest expansion in expressive capability in human history, a misfortune because abundance breaks more things than scarcity. We are now witnessing the rapid stress of older institutions accompanied by the slow and fitful development of cultural alternatives. Just as required education was a response to print, using the Internet well will require new cultural institutions as well, not just new technologies.

It is tempting to want PatientsLikeMe without the dumb videos, just as we might want scientific journals without the erotic novels, but that's not how media works. Increased freedom to create means increased freedom to create throwaway material, as well as freedom to indulge in the experimentation that eventually makes the good new stuff possible. There is no easy way to get through a media revolution of this magnitude; the task before us now is to experiment with new ways of using a medium that is social, ubiquitous and cheap, a medium that changes the landscape by distributing freedom of the press and freedom of assembly as widely as freedom of speech.

Analyzing the Situation

1. Part of Shirky's argument is a historical argument, one about how culture has responded to technological development in other situations. How does Shirky connect these varying situations in order to establish exactly what he sees as the situation of the development of digital technologies?

2. Does it matter that Shirky published "Does the Internet Make You Smarter?" in *The Wall Street Journal* and that it was circulated even further by *The Wall Street Journal* online? How does the location of its publication affect how we read Shirky's essay?

3. What does "Does the Internet Make You Smarter?" imply about the role of institution and power in media?

Analyzing the Rhetoric

1. Throughout "Does the Internet Make You Smarter?" Shirky uses the phrase "cognitive surplus." What does he mean by this term and how does he use it to support his position?

2. Shirky begins this essay by comparing the resistance to unmediated use of digital media with the development of the moveable-type printing press, a comparison he turns back to at several points in the essay. What does he gain in his own argument by making such a historical comparison? Is it a useful comparison?

3. Toward the end of his essay, Shirky provides three beliefs about why integrated literacy will fail in the age of the Internet. What is his purpose in articulating these three assumptions about the stance he argues against? Do they help guide his position and the remainder of his essay? In what ways?