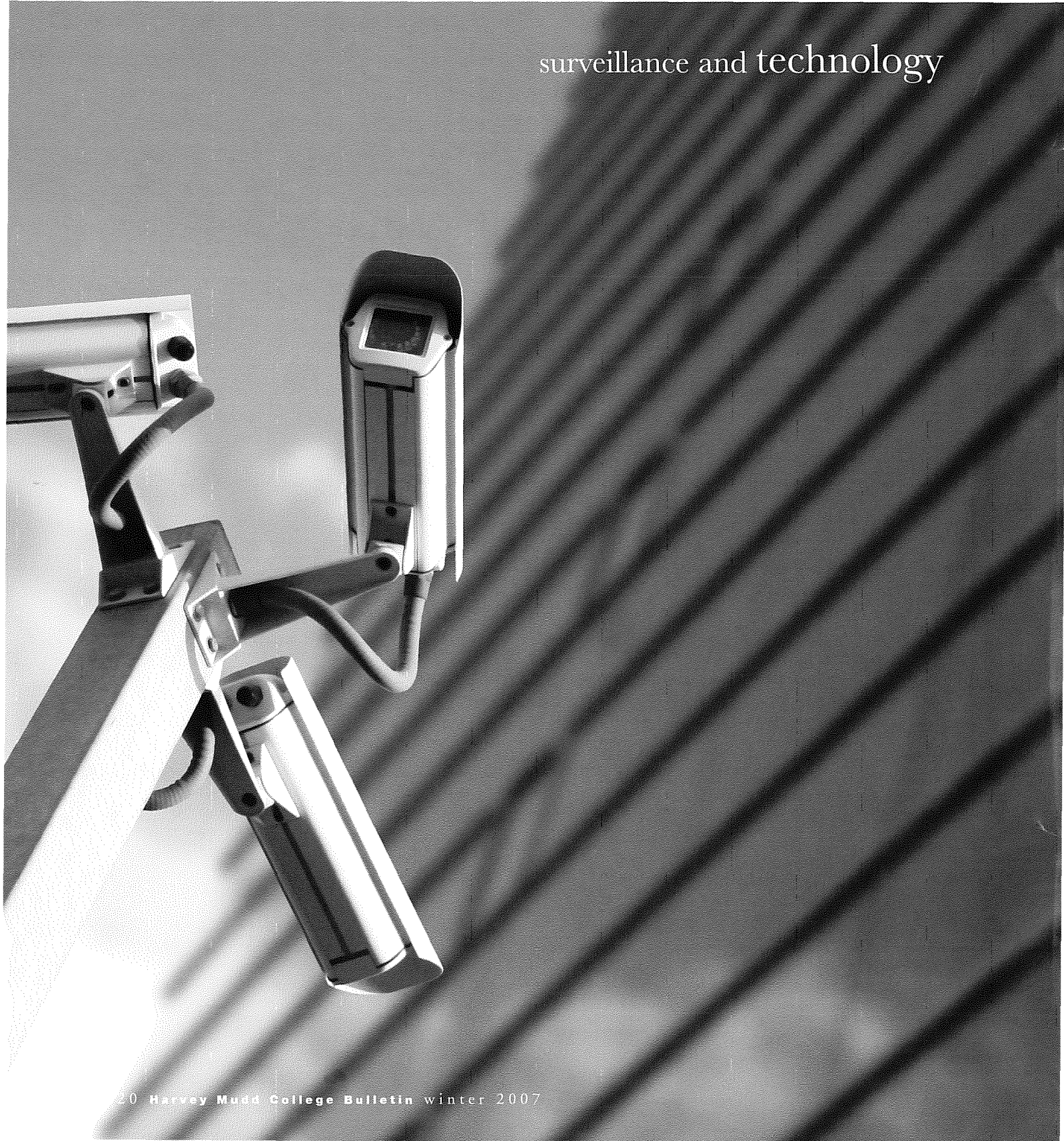
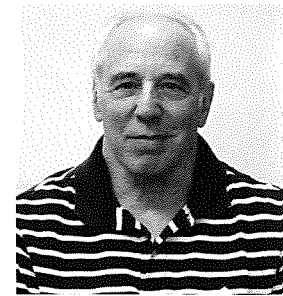


seeing and perceiving

surveillance and technology





"A lot of the tightening of controls and the more pervasive and intensive forms of collecting personal information that we see go back really to the beginning of the industrial revolution."

— Gary Marx, Hixon-Riggs Visiting Professor of Science, Technology and Society

BY LINLEY ERIN HALL '01

Parents can use hidden cameras to monitor nannies' behavior. Some companies read their employees' e-mail messages. Athletes regularly take drug tests. Online retailers track customers' purchases so that they can target ads or recommend other items to buy.

The term "surveillance" often conjures images of a spy following a target, listening in on phone conversations or watching Internet activity. But, today, much surveillance occurs through technology rather than by people, the reasons for the surveillance are as likely to be related to marketing as security, and the people under surveillance may have no idea that they are being watched.

"There are broad trends both socially and culturally within our society that need to be understood," says Gary T. Marx, Hixon-Riggs Visiting Professor of Science, Technology and Society. "It isn't just about things happening since 9/11. A lot of the tightening of controls and the more pervasive and intensive forms of collecting personal information that we see go back really to the beginning of the industrial revolution."

Marx is a professor emeritus at MIT and previously taught at Harvard and the University of California, Berkeley. He is also the author of the book "Undercover: Police Surveillance in America," which focuses on surveillance by people, and is working on a new book called "Windows Into the Soul: Surveillance and Society in an Age of High Technology," which looks at the technological side of surveillance. "Undercover" received the Outstanding Book Award from the Academy of Criminal Justice Sciences.

In the fall semester, Marx taught a course at HMC called Surveillance in Society. One goal of the class was analyzing the means and ends of various surveillance techniques, which may not always line up. For example, many stores and other private businesses use closed-circuit television (CCTV) cameras to help prevent theft and other illegal activities. Great Britain has taken this a step further by installing several million CCTV cameras in public areas with the stated goal of reducing crime. However, the cameras have been found to be more effective at helping to catch criminals after crimes are committed. In fact, overall criminal activity in Great Britain has not decreased significantly. Instead, the crime rates in areas without cameras have gone up while the rates in watched areas have gone down.

"Studies show that the location of crime just shifts. If you could see into every nook and cranny, then perhaps this wouldn't happen. But it becomes very Orwellian at that point, very Big Brother-esque," says Noel Godinez '08, an engineering major who took Marx's class. He refers to George Orwell's classic novel "1984" in which Big Brother watched over citizens. "A lot of [Marx's] case studies are very useful for

deeply analyzing surveillance tactics," says Godinez. "It makes you see how developing technology could be used for surveillance. It's a different way to look at technology."

The class also examined how surveillance has evolved in different places and at different times, reflecting variations in cultural and societal values. What is regarded as legal, ethical and justifiable in one country is sometimes seen as a gross invasion of privacy in another. This is particularly true as technology has permitted greater and faster collection of data.

"In many ways, technology is hardly neutral," Marx says. "It tends to reflect the interests of those in positions to develop and use it. Yet, in other ways, it is neutral. You can use a screwdriver for the purpose for which it was intended. You can use it to put peanut butter on your sandwich, or you could use it to do someone physical harm. A video camera will capture the image of anyone in front of it. But are cameras equally found in executive suites as on a factory floor?"

The use of technology in surveillance has also generated many legal and ethical questions, particularly as people find ways to use technology that the original designers did not anticipate. People will have different answers to the questions raised depending on the particular technology, the situation in which it is deployed and their values. A central message in Marx's work is that these issues can be extremely complicated and related to contexts. They require careful research and analysis, rather than sweeping assertions about either the necessary death of privacy in the face of new threats or the dawning of a new age of cyber-freedom. He encourages more public discussion of the issues, beyond those who have developed a device and before implementation.

The examination of technologists' work and its affect upon society aligns with HMC's mission, which is to see that students develop "a clear understanding of the impact of their work on society." During the spring semester Marx will teach the class Social Control and Surveillance and a faculty reading group will meet to discuss "Windows Into the Soul." The annual Hixon-Riggs Forum on Science, Technology and Society, to be held March 27–29, 2008, will consider the issues outlined in Marx's forthcoming book. There will be paper presentations, round tables and films, such as "Rear Window."

"It's my hope that in our best efforts to use science and technology to fix the problems of society that we don't end up committing self or social suicide. We can avoid that by probing our assumptions," Marx says. "I'm not a cheerleader for the technology, but I'm also not a Luddite. I'm not opposed to it. What I am in favor of is reasoned discourse." 