PRIVACY AND SURVEILLANCE: PUBLIC ATTITUDES ON CAMERAS ON THE STREET,IN THE HOME, AND IN THE WORKPLACE

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ABSTRACT

The authors explore public perceptions of privacy and video surveillance in the twenty-first century United States. Though much research and thought have been devoted to the issues of privacy and, to a degree, surveillance, there is a lack of research addressing how the general public perceives the current state of surveillance in our society and what they think should be done, if anything, about it. The authors conducted six focus groups to examine perceptions specifically of video surveillance in three areas: in the public sphere (on the sidewalk), in the private sphere (in the home), and at the workplace. Systematic differences of opinions among participants could often be explained by participants' ages. The paper concludes with suggestions of future areas of research.

Keywords: surveillance technology, privacy rights, public perception

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There is no dearth of writing about the perils of the erosion of privacy rights in the twenty-first century.[1] The "Snowden Saga" dramatically illustrates and documents the seemingly unlimited ways in which private matters can be revealed to and interpreted by the public.[2] The emergence of cell phone photography and recordings constitutes a sea change in the documentation of an endless list of public and private matters.[3]

Yet ironically co-existing with the overwhelming, multi-faceted data and observations about many, maybe most, aspects of an individual's life is a sense of how in the world such an encompassing change happened so quickly. George Orwell's famous work, *1984*, was for most of our history the shorthand for the futuristic world in which privacy was no longer valued by the new order.[4] In our study, to be described below, one of our respondents aptly put the "Orwellian world" in the context of 2015 by observing that "George Orwell would turn over in his grave"[5] were he subjected to today's privacy landscape. We have somehow gone from Orwell's overwhelmingly intrusive world to a new world in which Orwell's imaginary challenges seem modest or almost outdated, only thirty–two years later.

Three very specific, and admittedly anecdotal events, which one of the paper's authors experienced, punctuated this general

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[1] While there have been many books written over the past half-century addressing privacy and surveillance, there is less research focused specifically on public opinion on privacy and surveillance. *See*, *e.g.*, NICHOLAS CARR, THE GLASS CAGE: AUTOMATION AND US (2014); CHRISTENA E. NIPPERT-ENG, ISLANDS OF PRIVACY (2010); Jeffrey Rosen & Benjamin Wittes, Constitution 3.0: Freedom and Technological Change (2013); Alan F. Westin, *Privacy and Freedom*, 25 WASH. & LEE L. REV. 166 (1968).

[2] *See* Mark Mazzetti & Michael S. Schmidt, *Ex-Worker at C.I.A. Says He Leaked Data on Surveillance*, N.Y. TIMES (June 13, 2013), http://www.nytimes.com/2013/06/10/us/former-cia-worker-says-he-leaked-surveillance-data.html.

[3] Examples are too numerous to list in their entirety and can be seen on a daily basis in newspapers across the country. *See* Ken Belson, *A Punch Is Seen, and a Player Is Out*, N.Y. TIMES, Sept. 9, 2014, at A1. One example that comes to the authors' minds is the case of Ray Rice, the Baltimore Ravens player who was caught on a casino camera beating his wife unconscious.

[4] George Orwell, Nineteen Eighty-Four (1949).

[5] Focus Group M2, Rutgers University (Apr. 17, 2015) (on file with author).

observation about the speed and enormity of the changing role of privacy in our society. The first involved the rather boring and often dreaded day at the Department of Motor Vehicles spent obtaining a new driver's license. The endless lines were predictable; what was not predictable was posing for the picture that would appear on the license. When the time came to appear before the camera, there was an instruction to stop smiling. Incredulously, when asked why, the answer was that facial recognition software more efficiently worked on non-smiling faces. The thought that the state was now telling citizens "not to smile" for the purpose of easier tracking was, to say the least, troubling**.** Apparently smiles are banished in the interest of identity-surveillance machinery.[6]

The second event involved one of the authors teaching a course on civil liberties. In the course, privacy case law, including those few cases that tackle the question of on whom drug testing is allowed (border guards, school athletes, etc.), is of course examined[7], and quickly the conversation veered towards the more general matter of drug testing as a pre-condition for a job, routinely done by urine analysis. To the amazement of the instructor, well over one half of the class (with enrollment about sixty), had previously "urinated in a bottle" as a prerequisite for obtaining a job, or, in some cases, an internship. A generation ago, we are pretty sure, almost no one

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[6] It should be noted that the surprise and outrage expressed by the author who made this trip to the DMV was not shared by the other co-authors. As we discuss later in this paper, the authors hypothesized that this differing reaction could be explained by differences in age.

[7] *See*, *e.g.*, Vernonia Sch. Dist. 47J v. Acton, 515 U.S. 646 (1995) (noting that drug testing of athletes without suspicion is constitutional); *see also* Bd. of Educ. v. Earls, 536 U.S. 822, 837 (2002) (noting that drug testing student athletes is a "reasonably effective means of addressing the School District's legitimate concerns in preventing, deterring, and detecting drug use"); Skinner v. Ry. Labor Execs.' Ass'n, 489 U.S. 602, 633 (1989) (noting that mandatory blood and urine testing of railroad employees "is not an undue infringement on the justifiable expectations of privacy of covered employees, [and] the Government's compelling interests outweigh privacy concerns"); Nat'l Treasury Emps. Union v. Von Raab, 489 U.S. 656, 666 (1989) (noting that urine testing of U.S. Customs Service officers presents "a special need that may justify departure from the ordinary warrant and probable cause requirements."). Later in this paper, we look more systematically at privacy and technology in the context of the Fourth Amendment.

had to similarly submit to what could be considered a pretty serious claim on a private aspect of an individual.[8]

The third matter had two parts. Part I was a common debate in academic circles about whether television nightly news reports ought to identify the race of the alleged criminal as seen by the victim. Some felt that including race perpetuated stereotyping of "typical" criminals, and that race therefore ought to be omitted. This debate has ended. Why? Well, here too we fall back on a personal story. Each night, probably with no justification other than as an excuse to sit back with a bowl of ice cream, the same author of the first two anecdotes watches the inane nightly local news. This news, filled with stories of local crimes, is of course an apt setting to see how television stations handle the issue of criminal identification. But, identifying race recently is almost never an issue, because seemingly every crime committed that day is captured on one camera or another. Thus a picture of the alleged criminal is seen on the screen, and the need for identifying his or her race rarely arises.

Collectively these three events—smiling, urinating, identifying criminals—all implicated for the one researcher the way privacy is now perceived. The state seems to be comfortable forbidding smiling; employers seem to be comfortable insisting on applicants urinating; television stations seem to have a never ending supply of videos of criminal perpetrators, and these are displayed on nightly bulletin. The Huffington Post even has a page called "Dumb Criminals," dedicated to revealing pictures and videos of criminals caught in the act.[9]

These three practices came close to astonishing the senior members of the research team, though the student co-principal researchers had different reactions. When the students were approached by one senior researcher with these three anecdotes, they admitted that they did not think about cameras and surveillance enough to have an opinion on the matter and that

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[8] Indeed, the author has subsequently "tested" this assertion on other student groups and on his contemporaries (age fifty and up). Almost no one, no matter their jobs, had ever been forced to submit to a urine test; the number of students who had been made to undergo drug testing, over fifty-percent, remained constant across all student groups.

[9] *Dumb Criminals*, HUFFINGTON POST (Jan. 17, 2016), http://www.huffingtonpost.com/news/dumb-criminals/.

certainly, if they had to give an opinion, it would not be a strong one either for or against cameras. Born into a world in which being watched is the norm, they did not live through the enormous changes in technology to which the first researcher had to acclimate. The two student researchers were surprised by the fervor with which the senior authors reacted to events that are unquestioned in the students' lives. This stark contrast led to the instant research topic and the formation of a hypothesis encompassing the effect of one's age on one's perception of privacy rights.

In fact, the younger members of the research team observed that they not only are comfortable with video surveillance, but they also *desire* to share details about and snapshots of their personal lives, including their locations, over the internet. Facebook reported in its 2011 Securities and Exchange Commission filings that more than 250 million photographs were uploaded each day, which means that at least ninety billion photographs were posted that year to the site.[10] In 2015, Facebook reported that there were 1.05 billion daily active users—a seventeen percent increase from 2014.[11] While this type of online "self-surveillance" is not the focus of this paper, it did lead more generally to our exploration of the effect of age on the perception of surveillance privacy.[12]

This is an admittedly exploratory study limited to public attitudes towards *video* surveillance, joined with a brief survey of the Supreme Court's consideration of privacy in the context of the Fourth Amendment and technological developments. It is an exploratory study in two senses. First, we undertake this study without the claim of a rigorous systematic analysis of public attitudes. We use focus groups and interviews as our data

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[10] Facebook, Inc., Registration Statement (Form S-1) (Feb. 1, 2012).

[11] Facebook, Inc., Annual Report (Form 10-K) (Dec. 31, 2015).

[12] *See* Min-Sook Park et al., *A Taxonomy of Social Networking Site Users: Social Surveillance and Self-Surveillance Perspective*, 32 PSYCHOL. & MARKETING 601, 610 (2015). The term, "self-surveillance" is defined as "behavior in which individuals monitor, manage, and control their own expression and presentation." *Id.* at 602. This term is used in the context of social networking and to describe the manner in which individuals choose to broadcast information about their behavior, personality, and daily activities online. *Id.* at 602-03.

sources rather than comparing attitudes using more rigorous quantitative measures. Second, we unashamedly are giving our research attention to one aspect of the evolving changes with respect to individual privacy — surveillance in public and private settings — but we will use what we have learned to speculate about the evolution of matters that compose privacy more generally. Our respondents' views allow us to frame hypotheses. We do so primarily about surveillance, but sometimes also about the evolution of the "right to privacy" more generally. Our purpose is not to write a screed about a diminishing expectation of privacy, but rather to try to understand how the perception of privacy has evolved in our technological world and to frame hypotheses about this. Our purpose is also to discover the public attitudes toward current privacy practices based on the data which allow us to construct these hypotheses — hypotheses which of course will need the proverbial "additional research" of subsequent studies.

I. LITERATURE REVIEW

We limit this literature review to work relating to video surveillance. It would be beyond a Herculean task to even attempt a review of all recent writings on other privacy matters (for example, collection of phone records after September 11, 2001, GPS devices, DNA testing). We have also shied away from the vast literature on the morality of video surveillance. Our literature review aims to surface extant contentions, speculations, and research results relating to our focus on the public perception of video surveillance as well as briefly address the related Fourth Amendment considerations. We also briefly touch upon recent public policy involving surveillance and how it relates to the public's perceptions of them.

We begin by noting the rather limited amount of actual research that has been conducted on public attitudes toward surveillance practices. Data related to public opinion on surveillance are gathered primarily through polling. In 2014, the Pew Research Center found that out of 607 adults surveyed, eighty percent agreed that "Americans should be concerned about the government's monitoring of phone calls and internet

communications."[13] While phone and internet taps are different, and perhaps more personally intrusive, than video recordings, these data can be extrapolated to show the public's negative view of surveillance, including video surveillance, in general. On the other hand, after the Boston Marathon Bombing, a poll found that seventy-eight percent of those surveyed believed video surveillance cameras were a good idea "because they may help to reduce the threat of terrorism;" sixteen percent believed it was a bad idea "because surveillance cameras may infringe on people's privacy rights."[14] Aside from sparse polling, however, little research has been done specifically on public perception of video surveillance.

While we did not find extensive research into public opinion on video surveillance, there was a concentration of literature on the efficacy of public street surveillance, and, interestingly enough, the conclusions these studies drew about the deterrent effects of street cameras were mixed. In Britain, the use of closed-circuit television (CCTV) reduced crime in parking lots, but video surveillance in city centers and residential areas led to no statistically significant effect on crime.[15] However, studies conducted in other countries showed some positive accounts of the deterrent effect of cameras.[16] Most notably, South Korea

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[13] MARY MADDEN ET AL., PUBLIC PERCEPTIONS OF PRIVACY AND SECURITY IN THE POST-SNOWDEN ERA (2014), http://www.pewinternet.org/2014/11/12/public-privacy-perceptions.

[14] Americans on Terrorism Threats, N.Y. TIMES: CBS NEWS POLL (Mar. 26, 2016), http://www.nytimes.com/interactive/2013/03/05/us/catholics-poll-graphic.html?_r=0.

[15] See BRANDON C. WELSH & DAVID P. FARRINGTON, CRIME PREVENTION EFFECTS OF CLOSED CIRCUIT TELEVISION: A SYSTEMATIC REVIEW (2002).

[16] *See, e.g.*, Danielle K. Davis & Lise Abrams, *Here's Looking at You: Visual Similarity Exacerbates the Moses Illusion for Semantically Similar Celebrities*, 42 J. EXPERIMENTAL PSYCHOL.: LEARNING, MEMORY AND COGNITION 75, 90 (2016); *see also* Eric L. Piza et al., *Analyzing the Influence of Micro-Level Factors on CCTV Camera Effect*, 30 J. QUANTITATIVE CRIMINOLOGY 237 (2013); Joel M. Caplan et al., *Police-monitored CCTV Cameras in Newark, N.J.: A Quasi-experimental Test of Crime Deterrence*, 7 J. EXPERIMENTAL CRIMINOLOGY 255 (2011).

saw a 47.4 percent drop in robberies and thefts in areas with CCTV's compared to those without cameras.[17]

In addition to public settings, private residences can also have cameras installed in them. Cameras in the home are used for safety and security purposes, including catching thieves, monitoring babies and babysitters, and watching elderly or ill family members who may need constant attention. Legal issues aside, these cameras can record unwanted behavior or dangerous situations inside and outside the home, and they do so stealthily, as they come in different shapes and sizes to be hidden around the home or disguised as ordinary household items.[18] Of course, there are a great many imaginable benefits of these cameras. There have been instances of homeowners catching UPS workers stealing their packages and burglars taking their valuables.[19] The imaginable abuses, however, are just as great.[20]

While cameras in the home are primarily used for security, cameras in the workplace cover a wider range of possible uses and settings. They can be used for monitoring employees to ensure efficiency in addition to safety. In fact, cameras are used in offices to ensure that employees minimize wasted time and

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[17] Hyeon Ho Park et al., *Measuring the Crime Displacement and Diffusion of Benefit Effects of Open-street CCTV in South Korea*, 40 INT'L J. L, CRIME & JUST. 179, 191 (2012).

[18] *See* Cheap Spy Cameras, http://www.thehomesecuritysuperstore.com/home -spy-equipment-spy-cameras-cheap-spy-cameras-sub=219.

[19] *See, e.g.*, Michael Walsh, *WATCH: UPS Thief Caught on Tape Stealing Gifts*, N.Y. DAILY NEWS (Dec. 21, 2012, 5:35 PM), http://www.nydailynews.com/news/crime/watch-ups-thief-caught-tape-stealing-gifts-article-1.1225550; Eric M. Strauss, *Burglary Victims Catch Thieves with Home Surveillance Cameras*, ABC NEWS (Jan. 17, 2012), http://abcnews.go.com/Technology/burglary-victims-catch-thieves-home-surveillance-cameras/story? id=16016822.

[20] *See, e.g.*, Katherine Albrecht & Liz McIntyre, *Privacy Nightmare: When Baby Monitors Go Bad*, IEEE TECH. & SOC'Y MAG. 19 (2015). A chilling account of a parent's nightmare reveals a harmful consequence of the use of cameras in the home. *See id.* Parents of a ten-month-old woke up to a hacker watching and talking to their baby through a baby monitor camera that they had installed for the security of their child; when the parents followed the noise to the baby's room, the hacker rotated the camera to face the parents and started screaming at them. *Id.* Of course, this is an extreme worst case scenario, but it is certainly within the realm of possible consequence.

increase productivity.[21] Some studies even indicate an increase of occupational safety due to video monitoring of workplaces.[22] The efficacy of these cameras is debated, but there is evidence that camera surveillance can increase profits in settings in which employees are able to steal (for example, restaurants and retail stores).[23]

A study of nursing home cameras provides an important insight into the intersection of cameras in the home/workplace. The National Citizens' Coalition for Nursing Home Reform supports camera use to ensure that proper care is provided to nursing home residents. On the other hand, caregivers worry that camera footage can be misleading due to the ability to cut clips and even fabricate evidence of an incident that did not occur. An even greater concern may be that video surveillance leads to an unhealthy and suspicious work environment for employees.[24] There certainly seems to be a tradeoff between tangible positive consequences, such as improved healthcare and increased revenues, and intangible negative consequences, such as feelings of distrust and fear of abuse.

The bottom line is that little is known about attitudes towards surveillance. Combined with the provoking anecdotes regarding privacy incursions discussed earlier (smiling, urinating, stereotyping), the focus group inquiry into surveillance provides empirical insight and further gives us license to speculate about privacy tradeoffs more generally.

As already noted, the impetus for the research project was the realization that the two student researchers' outlook on video surveillance is vastly different from the professor's. While members of older generations conjure up images of "Big Brother," spying governments, and corporations when they

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[21] Steve Lohr, *Unblinking Eyes Track Employees: Workplace Surveillance Sees Good and Bad*, N.Y. TIMES, June 21, 2014, at A1.

[22] Paola Cocca et al., *Video Surveillance Systems to Enhance Occupational Safety: A Case Study*, 84 SAFETY SCI. 140, 148 (2016).

[23] Lamar Pierce et al., *Cleaning House: The Impact of Information Technology Monitoring on Employee Theft and Productivity*, 61 MGMT. SCI. 2299, 2302 (2015).

[24] Vince Galloro, *Watching out for nursing home residents*, 31 MOD. HEALTHCARE 24 (2001).

think of surveillance, members of the millennial generation are generally indifferent to the thought that they are constantly being watched. One explanation comes from research by Park about millennials' participation in surveillance.[25] Members of the tech age use social networking sites to track contacts' lives ("social surveillance") and to publicize their own lives in a light that is favorable to them ("self-surveillance").[26] We hypothesized that older groups would be less receptive to, and perhaps even put off by the idea of constant video monitoring, whereas younger groups, who constantly and voluntarily share personal information, would be neutral about video monitoring.

II. RESEARCH DESIGN

We conducted six preliminary interviews with scholars and practitioners familiar with the privacy and technology world in January and February 2015. These interviews were used to explore the issue and to structure the interview schedules for our focus groups. During these preliminary interviews, the team's investigators hypothesized that age would be the most significant explanatory variable for attitudinal differences.[27] This working hypothesis caused us to group our focus group participants by age. From February 20, 2015 to April 17, 2015, we conducted six focus groups: two of younger respondents (ages eighteen to twenty-five), two of middle aged respondents (ages thirty-five to fifty), and two of older respondents (ages sixty and older).[28] We have labeled the young groups "Focus Group Y1" (conducted on March 11, 2015) and "Focus Group Y2" (conducted on March 29, 2015); the middle-aged groups will be "Focus Group M1" (conducted on February 2, 2015) and "Focus Group M2" (conducted on April 17, 2015); the older groups will

[25] *See* Park et al., *supra* note 12.

[26] Park et al., *supra* note 12, at 610.

[27] This idea occurred to one of the investigators while the investigators were discussing the preliminary interviews. We noticed that the reaction to news items differed between the professor and the two student investigators, which lead to the hypothesis that age may explain the difference in reaction.

[28] Questionnaires were given to each participant before the focus groups to gauge general characteristics of the respondents. *See* "Appendix B".

be "Focus Group O1" (conducted on March 19, 2015) and "Focus Group O2" (conducted on March 20, 2015).

The focus groups were conducted by all of the principal investigators in two-hour sessions.[29] In general, the participants were given three scenarios. The first dealt with cameras on the street or in a public parking garage. Participants were asked about how they felt about these cameras. Depending on how the participants responded, they were then asked more questions to clarify their opinions of cameras and when they should and should not be used. The scenarios were also altered using mitigating and aggravating factors (introducing new facts/considerations into the scenario) to determine whether or to what extent the changes would affect the participants' views of surveillance. This situation was repeated twice, once with cameras in the home, in which we asked how participants would feel about recording their guests, or using a "nanny-cam" to watch their babysitter. The last scenario posed used cameras in the workplace. Concluding questions were about participants' opinions of privacy, surveillance, and the overlap of the two, about how their views have changed over time, and finally about how their views differed from those of their children or their parents.

III. FINDINGS

There are many ways in which we could present our interview and focus group findings. What we have opted to do is tease out major themes and subthemes from our analyses of the six groups. Wherever the effect was relatively clear, we also indicate whether we found that the "age variable" primarily accounted for differences in the findings. Again, we acknowledge that our focus group methodology (with its smaller pool of respondents) was designed to generate hypotheses and certainly not to subject these hypotheses to rigorous statistical testing.

[29] The questions, developed during the original interviews the investigators conducted, served as a structure for the focus groups, though the authors did deviate from the questions to develop the interviews as needed. *See* "Appendix A".

A. The "Non-Issue" of Cameras in Public Locations

There was almost universal acceptance of the reality that cameras surveying us when we are in public spaces is ubiquitous. Here, there is an important distinction to be made. While responses differed across demographics on what their privacy rights should be, the respondents were almost uniform in their admission that there are cameras everywhere in our everyday lives. Indeed, acceptance or at least resignation to the surveillance was so high and near unanimous that we think these data allow us to confidently reject (well beyond the usual exploratory qualification) the common view that the public is uneasy or even unsupportive of this kind of surveillance.[30]

The observation/acceptance/resignation that we heard time and time again was that ubiquitous surveillance cameras are the new reality. As one respondent described, "the train has already left the station."[31] This view was echoed often in different ways though saying essentially the same things with the metaphor differing. We heard that you "can't put the genie back in the bottle,"[32] that you "can't make the river flow backwards,"[33] that privacy concerns have been "overrun by events", that surveillance is "already a fact," and that "Big Brother is now real."[34] In other words, we heard a plethora of ways to express

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[30] *Contra* Christopher Slobogin, *Is the Fourth Amendment Relevant in a Technological Age?* in THE FUTURE OF THE CONSTITUTION, Brookings Governance Studies Series (Dec. 8, 2010). This conclusion stands in contrast to Slobogin's general argument that "many people *are* bothered by technological surveillance." *Id.* at 9. He further observes that "public camera surveillance is considered, on average, to be much more intrusive than a roadblock." *Id.* at 10.

[31] Focus Group O2, Rutgers University (Mar. 20, 2015) (on file with author).

[32] Focus Group O1, Rutgers University (Mar. 19, 2015) (on file with author).

[33] Focus Group O2, *supra* note 31.

[34] "Overrun by Events" (OBE) is a term from Focus Group O1 (Mar. 19, 2015) that the authors of this paper found useful to describe the responses we heard in our focus group where respondents' sensitivity to surveillance technology and prevalence was lessened by the technology's expansion happening more rapidly than the respondents could come to terms with. The authors also found it was applicable to describe conducting research on privacy and surveillance, as each week brought a new headline involving privacy or surveillance in some way that changed the landscape of privacy.

the same idea. So, cameras in the sky is a given across the different focus groups and different age groups; cameras are here to stay. Interestingly enough though, across our different age groups we did note a difference in "comfort level" with this new reality. For the younger respondents it was almost a non-issue in the sense that they had never given serious thought as to how intense the surveillance watching them was. It was, and always seems to have been a "given" in their worlds.[35] Participants in the middle aged and older groups similarly accepted surveillance cameras as a given, but there seemed to be a little more discomfort about them. They recognized *why* surveillance cameras in the streets were a given, but there was unease in their acceptance that simply was not present with the younger respondents. One of the pragmatists in the older group told us that we were asking the wrong questions by talking about whether cameras are good—he thought that cameras and surveillance are not inherently good or bad, and that what we needed to talk about was how they should be used.[36] This highlighted a general point raised several times about the futility of trying to limit surveillance cameras. The acceptance for all groups was not necessarily apathy, but a realization that even if we decided cameras were "bad" and worked to get rid of them, the most we could do is limit them, because they are now so entrenched in our society.

Since all groups were in agreement that the cameras were "here to stay," the natural next question was asking what justifications for keeping them could be offered. The most popular point, of course, was crime deterrence.[37] Cameras were

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[35] *See* Focus Group Y1, Rutgers University (Mar. 11, 2015) (on file with author). Moreover, and this is a theme that we will revisit several times in this paper, in the context of the ways younger respondents go about their daily lives, distant cameras are not even close cousins to the kinds of privacy tradeoffs that characterize their lives. Any discussion they may have about these tradeoffs always focus around a familiar list of ways in which young people air their private lives: Facebook, Twitter, Snapchat, text messaging, etc.

[36] *See* Focus Group O1, *supra* note 32.

[37] *See* MARK SCHLOSBERG & NICOLE OZER, UNDER THE WATCHFUL EYE: THE PROLIFERATION OF VIDEO SURVEILLANCE SYSTEMS IN CALIFORNIA 11 (Cathy de Heer & Rene Ciriacruz eds., 2007) (discussing how cameras are promoted without evidence of their actual effectiveness, resting on the assumption that they *must* work).

simply assumed to serve as deterrents.[38] Many respondents noted the prevalence of cameras in the United States, and their even greater presence in other settings, London being the locale most often cited.[39] We prodded further on this "deterrent contention," and asked, as some studies suggest, whether the respondents would still favor street cameras even if the deterrent effect were not established.[40] Almost without exception, respondents still endorsed the cameras. If deterrence did not work, they speculated the primary purpose of cameras would be to provide evidence for the solution of crimes. The clear poster child for the efficacy of cameras in this crime-solving role was the 2013 Boston Marathon bombing. We could predict with greater than ninety percent certainty that this would be the example respondents evoked to *prove* the value of cameras for crime solution. And this was such a powerful argument for our respondents that it trumped all other possible considerations, such as matters of intrusiveness or more generally, privacy. Crime prevention and deterrence were the obvious justifications for cameras; but if the data did not

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[38] *See* Stephen J. Fay, *Tough on Crime, Tough on Civil Liberties: Some Negative Aspects of Britain's Wholesale Adoption of CCTV Surveillance During the 1990s*, 12 INT'L REV. L., COMPU. & TECH. 315, 316 (1998) ("CCTV is now seen as the fashionable solution to everything").

[39] *See We're watching you: 'Britons caught on CCTV 70 times a day'*, LONDON EVENING STANDARD, (Mar. 3, 2011), http://www.standard.co.uk/news/were-watching-you-britons-caught-on-cctv-70-times-a-day6573202.html (citing the number of CCTV cameras in Britain as 1.85 million and noting that the average person in London is caught on camera about seventy times a day); *see also* Frank Langfitt, *In China, Beware: A Camera May Be Watching You*, N.P.R. (Jan. 29, 2013, 3:30 AM), http://www.npr.org/2013/01/29/170469038/in-china-beware-a-camera-may-be-watching-you (noting that the Chinese government has in recent years, in comparison to the figure cited for Britain, installed more than twenty million cameras throughout the country).

[40] *See* Jason Ditton & Emma Short, *Yes, It Works, No, It Doesn't: Comparing the Effects Off Open-Street CCTV in Two Adjacent Scottish Town Centers*, 10 CRIME PREVENTION STUD. 201 (2011) (arguing that CCTV cameras can increase crime by increasing the number of crimes that are caught on camera and decrease crime by deterring potential offenders). *See also* Jerry Ratcliffe et al., *Philadelphia Foot Patrol Experiment: A Randomized Controlled Trial of Police Patrol Effectiveness in Violent Crime Hotspots*, 49 CRIMINOLOGY 795 (2011) (describing a study carefully conducted on the effectiveness of police foot patrols in "hot spots" and found decreased crime in some places, but not in others).

support these goals, certainly crime solution information justified expansive video surveillance in public spaces.

The third factor that explained the almost universal acceptance of public video surveillance was not unrelated to the first two but deserves separate attention. It focuses on the *process* by which video surveillance is introduced in a locale. Specifically, we learned from our own anecdotal experiences, the literature, and the focus groups, about a pattern that tracks a path of this kind of technological incursion into the public sphere. What appears to be the case, is that notwithstanding the plausibility of the deterrent, or, crime solution benefits of cameras, when they are first proposed, many are concerned. The tradeoff between putative goals and obvious privacy issues is clear. The train has not yet left the station, so the issues are clearest and most likely to be raised. One anecdote experienced by a co-author of this paper is illustrative. When his university first proposed to use a very limited number of surveillance cameras on a handful of streets and isolated university parking spaces, there was some concern about the tradeoff with expectations of privacy. The issue was debated, the cameras were introduced, and twenty years later, with essentially no further discussion, the campus had become saturated with cameras.[41] As one scholar noted about cameras in Britain, they

[41] Interestingly, these concerns about this introduction of cameras on the New Jersey campus were, as predicted present initially, but surprisingly limited to a few of the members of the committee that oversaw safety issues at the school. Others apparently already "bought into" the seemingly self-evident deterrent belief. A co-author of this paper was the faculty member who objected. He stressed that his objection was not a simple knee-jerk reaction against surveillance but instead was a genuine concern about the conflict between what the cameras could obtain and what would be lost in terms of privacy. The concern, though raised, was brushed aside and the cameras were introduced. Years later, the faculty member met a University Vice President who oversaw the introduction of those first cameras, and who recalled clearly the objection or concerns raised by the faculty member. These concerns, he recalled, were not given much import at the time. This made a call the author had received earlier in the day from a progressive California university especially interesting. The California school had a much more substantial debate about the cameras being installed. The comparative culture implications are not inconsequential; there are differences in receptivity to public surveillance, differences probably voiced most strongly at the outset (in differing degrees), but voiced generally at the point of introduction. Once in place, though, we speculate that growth seems to take place without comparable concerns looming large.

"have spread like a mutating virus."[42] Put them in place, maybe some are concerned. But once in place, the fact that they are already "out of the station" combines with their perceived important deterrent and/or crime solving contributions to make their growth a sure thing. What was once problematic becomes a given, something that is "just out there."

There appears to be another "train in the station" moment lurking at the frontier of public surveillance, and here we found a different pattern of reactions. Specifically, after the consensus for street visual surveillance emerged, we muddied the waters by asking "what if technology allowed *auditory*, and not just *visual*, surveillance?" Respondents had stressed in their acceptance of the latter the common "reasonable expectation of privacy" argument, and noted that while on the street, this is shrunk or disappears. In our focus groups, we then applied this argument to audio surveillance as well - if you are speaking while walking down the street, there is always the possibility that a passerby might overhear your words, so arguably you lose your "reasonable expectation of privacy." However, most of the respondents did not accept this argument. What was plain to the four investigators was that across all the focus groups, *audio* surveillance, in contrast to *visual* surveillance, made most of the respondents uncomfortable. It was also something that many had not previously reflected about.[43] It is also an issue which, given the current pace of technology's improvement, may need to be addressed as technology increases surveillance capabilities.[44] We will return to gauging these views more systematically below, but here we just conclude with the

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[42] *See* Mary Braid, *Next time, Could it be you on Display?* THE INDEP. (Nov. 27, 1995), http://www.independent.co.uk/news/next-time-could-it-be-you-on-display-1584008.html.

[43] One of this study's co-authors suggested that it would be interesting to repeat the focus groups, not just in another decade or two (as we will suggest in our conclusions) but ten days after the first session was held—the reason being that we appreciated that we were bringing to the fore of respondents' minds matters that might not otherwise have been salient for them. Thus it would valuable to see whether, after they mulled these issues over (as a result of the first focus groups questions), their subsequent views varied.

[44] *See* Tom Morgan, *Lip-reading Technology Breakthrough to Be Used on CCTV*, THE TELEGRAPH 12 (Mar. 26, 2016, 1.46 PM), http://www.telegraph.co.uk/news/2016/03/25/lip-reading-technology-breakthrough-to-be-used-oncctv.

observation that unanimity surrounding visual surveillance crumbles when an auditory component is introduced. Discomfort/uneasiness and some sense of a privacy violation are substituted for the sentiments "it's important," "I didn't do anything wrong," and "it's now part of how we protect our streets."[45]

B. Cameras in the Home – Nanny Cams

Technology for monitoring places in the home and workplace are becoming available, and the costs for these new technologies are plummeting. Over the Internet, advertisements for surveillance cameras for as little as forty dollars are commonplace; many of these cameras allow monitoring from remote locations (often, with the proper software installed, using nothing more advanced than a smartphone).[46] Indeed given the low cost of these devices and the ease of installation and monitoring, it is little wonder that there have been a number of recent news reports of truly horrendous peeping tom incidents.[47]

With regard to home surveillance, we limited our focus group questions to "nanny cams," cameras designed to monitor the behavior of caregivers for children. Again, it is a given that with our limited sample, discerning age-related patterns is suggestive and not by any means conclusive. With this as a caveat, one of the most interesting, unpredicted findings of our focus group discussions was on these "how do you feel about

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[45] These statements, or very similar statements were made time and time again during all focus groups.

[46] *See e.g.*, Cheap Spy Cameras, *supra* note 18.

[47] Numerous examples of hidden cameras being used to surreptitiously record people litter the media. *See e.g.*, Keith L. Alexander, *New Hearing Scheduled for D.C. Rabbi Sentenced to Prison for Voyeurism*, WASH. POST (July 9, 2015); *California Police Arrest Man in Connection with Camera Found in Starbucks Bathroom*, FOX NEWS (Aug. 19, 2015), John Gregory, *Dollar Tree Manager Arrested after Secret Camera Found in Bathroom*, ABC NEWS (Sept. 23, 2015); Daniel Victor, *Andrews Is Awarded $55 Million Over Videos*, N.Y. TIMES, Mar. 8, 2016, at B7; Nick Madigan & Ravi Somaiya, *Hefty Damages to Hulk Hogan in Gawker Suit*, N.Y. TIMES, Mar. 19, 2016, at A1.

nanny cams in your house" series of questions to the three groups. The respondents in the young focus groups seemed to be resigned to the use of nanny cams. As one of the participants observed: "[t]hey have a right to make sure you're doing your job because they are paying you."[48] Another noted that, "[t]hey are not going to consult us first before putting these cameras up,"[49] and yet a third respondent, simply assuming that cameras would be present, reflected that "[it] is not productive to constantly think about it."[50]

The subjects in the two focus groups of older participants were supportive of nanny cams, but their support was of a very different flavor. Whereas the young respondents accepted the inevitability of home surveillance cameras on caregivers, the most senior respondents strongly endorsed these cameras. Their reasons were almost always the same—they believed the cameras could protect their grandchildren. If the Boston Marathon was the poster child for public surveillance, grandchildren's protection was the poster child for the endorsement of nanny cams by the older respondents, who were almost all in fact, grandparents. We tried to gauge the strength of this endorsement by noting that historically these respondents did not rely on nanny cams themselves, that instead they presumably used "due diligence" to select the individuals who cared for their children, and that this probably worked. With the exception of one respondent who did indeed experience a problem with a babysitter, everyone else acknowledged that in fact it had worked out.[51] So we asked, why the unqualified endorsement of nanny cams now? Weren't they concerned about privacy issues? The answer was straightforward—safety of grandchildren trumped all other issues. If the technology was available to secure safer treatment, they thought, we should use it. Also regarding "due diligence" arguments, respondents fell back on the argument that "times are different now." The oft imagined golden age of their

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[48] Focus Group Y2, Rutgers University (Mar. 29, 2015) (on file with author).

[49] *Id.*

[50] *Id.*

[51] Focus Group M1, Rutgers University (Feb. 2, 2015) (on file with author).

parenting years, when one could be more secure in a choice of a caregiver, was compared to today's times in which all kinds of dangerous behavior apparently lurks just below the surface.

The middle group provides an interesting third position—what we label the "agonized view." Respondents here too realize the attraction of technological monitoring, and surely share in their concern for the welfare of the children being watched. But perhaps because it was disproportionately their children who were being monitored, they seemed to harbor an ambivalence about the desirability of cameras. On the one hand, of course the safety considerations were plain; but on the other hand, there was an element of *trust* that they felt employers ought to accord the babysitter. If they had doubts, they thought, they would not hire the individual; but if they did hire him or her, they would not have to subject the babysitter to "watchful electronic eyes." Some had been babysitters themselves and would not have felt comfortable with these devices, and they felt similarly when they considered the employment of such devices on their own children. There was a sense that the "transition" to the nanny cam world was in some way more salient and created a more palpable "agonizing" in the middle group than for the other two groups. As one of these respondents put it: "I think we prefer twenty years ago. We didn't have all this [technology]. The more we use this technology [now], the more stress. We have less trust. We've replaced trust with cameras."[52]

Again, these are qualitative findings, and we are focusing on themes that loomed largest in the discussions and that yield testable hypotheses for future studies. But the conflicted feelings about the use of cameras, the way technology drives their use, and the general matter of trust was clearly strongest among the middle-aged group in our focus group data.

[52] *Id.* Interestingly, one point that only the middle groups brought up was the possibility to use camera footage to help protect the babysitters from lying children. Perhaps the middle group respondents were able to give this perspective considering most of them had children over the age of fifteen, whereas the older group respondents were visualizing their very young grandchildren.

C. Workplace Cameras

Moving to the third locale about which we inquired, workplace surveillance, again some intriguing, but here especially tentative, themes emerged. The tentativeness is a product of our collective sense that in this area the respondents across all three groups had less experience, and so were responding even more often with conjectures, speculations, and not much real experience. The members of the youngest groups had the most experience with being observed in their jobs, both because the advent of cameras was a more recent development and because during this period, they worked at jobs most likely to use cameras. So, for example, we were told that a number of applicants who had worked at cash registers in retail stores had surveillance cameras on them; similarly, those who worked or had worked in warehouses and restaurants were monitored with cameras.

Almost no one in any of our focus groups, however, had cameras observing their work in "higher level positions." We asked about how would feel if there was "camera creep," and if cameras moved toward monitoring not just employees on the bottom, but those in higher position in a company. On balance, the respondents did not like this idea one iota. While accepting that it could occasionally afford them protection from unfounded claims about their behavior from clients, overall they felt that cameras were unjustified and unnecessary intrusions. There was a sense, as one respondent put it, that "better metrics" of their performance should be used. Either they produced or they didn't produce; cameras were not necessary (and were a personal intrusion) when the more tailored metric should have been employed. They felt that the cameras would delight in recording a "gotcha moment," and this was a poor substitute for what should be the appropriate and fair gauge of performance.

We pushed on this during the groups and advanced the theme that metrics notwithstanding, one could argue that performance could always be better were time not spent on matters that might be discovered or discouraged by camera surveillance. Arguably someone could be in a high policy or scientific position in a firm, and in this position generate important work. But, we argued, if he didn't spend time on Facebook, or checking sports scores or stock market moves,

he/she could be even better. The respondents were not persuaded. We found ourselves returning to what one of our early interviewees had predicted, and mulling over his hypothesis. He argued that in the workplace, corporations were comfortable with monitoring those "at the bottom," but that were no shortage of excuses for not monitoring higher-ups.[53] And from our focus groups, it appeared that this was indeed the case. Nevertheless though, we wonder if the more positive receptivity to cameras in public arenas and in the home, which we also generally found in our focus groups, might suggest a kind of "camera crawl" in the future in the organizational setting and in other areas, for example—the college classroom.[54] If we use cameras in one place, what prevents us from using them in a second?

IV. QUANTITATIVE OPPORTUNITIES TO GAUGE PUBLIC ATTITUDES ABOUT PUBLIC AND PRIVATE SURVEILLANCE

Before turning to the more general implications of what we have learned about surveillance, and about the right to privacy more generally, time and again we were struck by the "yield" of two kinds of questions. The first was the qualitative "feeling" for respondents' attitudes on a range of issues. This "softer" data were perhaps richer for us precisely because they were precursors to constructing more rigorous tests, or more likely, because they were nuanced and not easily subject to one sort or another of quantitative measure (scales, dichotomous yes/no, etc.). Indeed, because we were inquiring about matters not actively reflected upon by the respondents,[55] nor very salient to

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[53] Interview with Rutgers University, Graduate Student, Rutgers Univ. (Dec. 15, 2014) (on file with author).

[54] *See* John Merrow, *Using Video in the Classroom: It's Not Just About Surveillance*, HUFFINGTON POST (Dec. 16, 2010), http://www.huffingtonpost.com/john-merrow/video-in-the-classroom_b_796702.html.

[55] Indeed, some told us that we had heightened their consciousness, and made them a bit paranoid about "being watched" after leaving the group session.

them, the opportunity to reflect and interact during the focus groups seemed a perfect way to tap feelings about these issues in broad terms. But, we also found that several issues that we explored very clearly should be studied in quantitative way in a larger sample. This is not to say that other findings could not be turned into a more quantitative inquiry; one might, for example, create scenarios which would give each respondent the same context, and ask specifically about these. But even without this kind of approach, it was plain that six of the issues that surfaced during our discussions clearly needed a quantitative polling, for our respondents were divided on these. We did seek votes on each, but in light of the unrepresentative and small sample, their vote tallies are less consequential than is our observation that these were issues that seemed to divide respondents. We mention them here to provide a final insight into the "flavor" of the focus groups.

We have already noted what we think is strong support by the youngest and oldest respondents to the use of nanny cameras (for very different reasons). We would like to see this hypothesis tested more systematically, especially the age correlation. Second, we found a huge divide across all three age groups on whether the caregiver should be told they are being watched by a nanny cam. Arguments on either side are predictable (someone ought to know as a matter of "right" that they are being watched compared with issues of effectiveness of cameras if the individual knows he or she is being watched). Our thumbnail data suggests a pretty even split from our respondents, but again many of them had not thought this matter through to any great extent. The third and fourth questions which divided respondents, and for which quantitative data could and should be obtained, are on expansion of video surveillance. As noted earlier, respondents did not have any significant objections to public video surveillance; but when we added auditory surveillance, this consensus crumbled. "Listening" was terra nova for the respondents, and their views were again divided in support or non-support groups. The same can also be said in a fourth area—facial recognition.[56] Here respondents knew even less

[56] For the purposes of limiting the scope of this paper, we are not undertaking a systematic review of the very important emerging area of facial recognition technology.

about the potential technology, but one could imagine a series of quantitative survey items tapping their views in response to different kinds of facial recognition scenarios.[57]

The final two areas in which we believe substantially more probing by closed ended questionnaires would be fruitful deal with the locales of the cameras. We have briefly discussed cameras in the workplace and noted that beyond routine jobs at a relatively low level of the organization chart, there does not seem to have been much thought given to possible expansion of workplace surveillance. Again, after presenting subjects with specific scenarios, it would be intriguing to see if differences emerge on higher level surveillance cameras (corporate officials, classrooms, etc.). Finally, there were surprising divides on the seemingly invasive issue of cameras in dressing rooms in large department stores. We were told—to the amazement of at least the most senior author on this project—that in fact there are cameras in many dressing rooms, though the store must note this outside the room. The two focus groups of young respondents seemed to be more aware of this and/or even if not aware less likely to object. As we saw in the nanny cam setting, there seems to be an acceptance of a new world, not necessarily an endorsement of it. The other respondents were more divided on this, and we think this again a fertile area for quantitative data collection.

V. THE CASE LAW: PRIVACY AND TECHNOLOGY

We turn now to a brief review of how the law has dealt with advances in technology such as video surveillance which threaten privacy, with primary focus on the United States Supreme Court.[58]

Many and perhaps most legal commentators, including such prominent names as Lawrence Tribe and Lawrence Lessig, have argued that the Fourth Amendment, through judicial

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[57] For example, questions might concern who should be allowed to watch the video and for how long the video recording should be kept.

[58] A comprehensive survey of how the law at all levels has dealt with video surveillance is beyond the scope of this paper and not central to its main points. Nonetheless, it is worth considering briefly how the law has addressed the rise of new technologies such as video surveillance.

interpretation, has a unique and leading role to play in how society addresses the interplay of privacy and technology.[59] As one leading scholar has described this tenet of conventional wisdom: "When technology threatens privacy, the thinking goes, the courts and the Constitution should offer the primary response. While Congress and state legislatures may have a limited role regulating government investigations involving new technologies, the real work must be done by judicial interpretations of the Fourth Amendment."[60]

While it cannot be said that the Court has never been cognizant of changes in technology, and never addressed questions posed by new technologies, it is not too much to say that, speaking generally, the Court has done so infrequently and with insufficient attention to the new technologies. Again, at least until recently, the Court has not shown a great interest in keeping up with changes in technology and stepped in only at a far slower pace than technology has advanced. However, a trio of cases from the start of this century may foreshadow a change in this regard.

A. The Twentieth Century: Olmstead and Katz

The Fourth Amendment prohibits "unreasonable searches and seizures."[61] In most of the cases in which the Court has addressed new technology, the issue has been whether the use of the technology amounts to a "search" under the Fourth Amendment.

At the time of the framing and ratification of the Fourth Amendment, improper searches and seizures with which the framers' generation were most concerned involved efforts by government agents to enter one's home to physically rummage

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[59] *See* Orin S. Kerr, *The Fourth Amendment and New Technologies: Constitutional Myths and the Case for Caution*, 102 MICH. L. REV. 801, 803 n.7 (2004).

[60] *Id.* at 803. It should be noted that Kerr disagrees with this proposition, arguing that legislatures should develop the new rules regarding technologies, rather than the judiciary. *Id.* at 806.

[61] U.S. CONST. amend. IV.

through hard documents.[62] As one leading scholar has described the "paradigmatic" situation that the framers of the Fourth Amendment sought to address:

> Famous search and seizure cases leading up to the Fourth Amendment involved physical entries into homes, violent rummaging for incriminating evidence once inside, and then arrests and the taking away of evidence once found. These examples and some contemporaneous statements during the ratification debates, suggest that home entries and rummaging around once inside were understood as the paradigmatic examples of searches.[63]

Technology, of course, is nothing like that paradigmatic situation; just the opposite, in fact, as new technologies not only greatly expand the opportunities and methods by which things may be searched and seized, but also the nature of what may be searched and seized. As one scholar noted,

> [T]oday, with the introduction of devices that can see through walls and clothes, monitor public thoroughfares twenty-four hours a day, and access millions of records in seconds, police are relying much more heavily on what might be called 'virtual searches,' investigative techniques that do not require physical access to premises, people, papers or effects, and can often be carried out covertly from far away.[64]

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[62] *See* William J. Cuddihy, *American Search and Seizure, 1776-1787: The Years of Paradox*, in THE FOURTH AMENDMENT (2009); Thomas Y. Davies, *Recovering the Original Fourth Amendment*, 98 MICH. L. REV. 547, 601-02, 611 (1999); William J. Stuntz, *The Substantive Origins of Criminal Procedure*, 105 YALE L.J. 393, 399 (1995); David E. Steinberg, *Sense-Enhanced Searches and the Irrelevance of the Fourth Amendment*, 16 WM. & MARY BILL RTS. J. 465, 480-84 (2007).

[63] Orin S. Kerr, *The Curious History of Fourth Amendment Searches*, 2012 SUP. CT. REV. 67, 72 (2012).

[64] Slobogin, *supra* note 30, at 12.

Two of the major Fourth Amendment decisions of the Twentieth-Century indeed involved new technology, specifically wiretaps. In 1928, the Supreme Court decided *Olmstead v. United States*,[65] involving a challenge to a wiretap. Not that the Court was quick to take on the new technology; again, just the opposite. By the time the Court took on the issue in *Olmstead*, capabilities akin to wiretapping (by which we mean speaking generally the ability to surreptitiously capture communications) and the inclination to use them had been around nearly a century.[66] Even more important, in *Olmstead*, the majority of the Court gave little attention to the new technology, or to the threats that it might pose to values protected by the Fourth Amendment. Instead of a careful consideration of wiretaps and the special risks they posed to traditional Fourth Amendment values, the majority simply dismissed the challenge, reasoning that the use of a wiretap did not constitute a search or seizure for purposes of the Fourth Amendment, since there had been no entry into the home and what was intercepted – communications – were not physical items such as papers or effects.[67]

Olmstead is and remains an important case not for the majority opinion, but because of the dissent of Justice Louis Brandeis, who did argue for taking into account the new technology.[68] Brandeis' dissent has become famous, and most

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[65] 277 U.S. 438 (1928).

[66] *See* Michael Pollak, *A Short History of Wiretapping*, N.Y. TIMES, Feb. 28, 2015, at MB3; Howard J. Kaplan et al., *The History and Law of Wiretapping*, 2012 A.B.A. SEC. LITIG. (2012); *see also* EDWIN C. FISHEL, THE SECRET WAR FOR THE UNION 4-5 (1998) (noting that the capability to intercept enemy telegraph messages existed during the Civil War but arguing that the practice was little used because of the risks involved).

[67] *Olmstead*, 277 U.S. at 464 ("The amendment itself shows that the search is to be of material things – the person, the house, his papers or its effects . . . The United States takes no such care of telegraph or telephone messages as of mailed sealed letters." *Id.* The Court continued: "The amendment does not forbid what was done here. There was no searching. There was no seizure. The evidence was secured by the use of the sense of hearing and that only. There was no entry of the houses or offices of the defendants."). *See also* U.S. CONST. amend. IV.

[68] The case was decided by vote of five to four, with dissents by Justices Holmes, Jr., and Butler, in addition to Justice Brandeis. For more on *Olmstead*

often quoted, for his eloquent discussion of a "right to be left alone,"[69] but another passage may be even more important for the point being made here. He spoke about the need for the Constitution to take into account "modern conditions" and concluded, "time works changes, brings into existence new conditions and purposes."[70] "Subtler and more far-reaching means of invading privacy have become available to the Government. Discovery and invention have made it possible for the Government, by means far more effective than stretching upon the rack, to obtain in disclosure what is whispered in the closet."[71]

The Court addressed wiretaps again almost forty years later, in *Katz v. United States*.[72] In the decision, described variously as a "landmark" and "revolutionary" ruling[73], the Court discarded the usual test for determining whether there had been an improper search, and instead adopted the "reasonable expectation of privacy" test most frequently used today, a standard often echoed by our focus group respondents with respect to camera surveillance in public spaces.

That case involved a wiretap on a phone in a phone booth used to listen to the defendant's end of conversations in which wagering information was transmitted. The Court ruled that the eavesdropping by government agents violated the Fourth Amendment.[74] The Court rejected the approach in *Olmstead* that to find a violation of the Fourth Amendment, there has to

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and Justice Brandeis' dissent, *see* JEFFREY ROSEN, THE UNWANTED GAZE 59-60 (2001); MELVIN I. UROFSKY, DISSENT AND THE SUPREME COURT 194-208 (2015).

[69] *Olmstead*, 277 U.S. at 478 (quoting Boyd v. U.S., 116 U.S. 616, 630 (1886)).

[70] *Id.*

[71] *Id.* at 472-73.

[72] Katz v. United States, 389 U.S. 347 (1967).

[73] *See* Anthony G. Amsterdam, *Perspectives On the Fourth Amendment*, 58 MINN. L. REV. 349, 356-58 (1974); *see also* James J. Tomkovicz, *Beyond Secrecy for Secrecy's Sake: Toward an Expanded Vision of the Fourth Amendment Privacy Province*, 36 HAST. L. J. 645, 648-49 (1985); Kerr, *supra* note 59, at 820.

[74] *Katz*, 389 U.S. at 359.

be a physical intrusion into the home and that something tangible (an "effect") must be taken.[75] However, the Court also rejected the idea that there was a general constitutional right to privacy, offering that any such right would be found in state laws rather than the Constitution.[76]

The Court ruled instead:

> For the Fourth Amendment protects people, not places. What a person knowingly exposes to the public, even in his own home or office, is not a subject of Fourth Amendment protection. But what he seeks to preserve as private, even in an area accessible to the public, may be constitutionally protected.[77]

The Court ruled: "The Government's activities in electronically listening to and recording the petitioner's words violated the privacy upon which he justifiably relied while using the telephone booth, and thus constituted a 'search and seizure' within the meaning of the Fourth Amendment[]," and that the government agents could have, and should have, obtained a warrant before engaging in the wiretapping, regardless of how cautious they were in their handling of the operation.[78]

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[75] *Id.* at 352-53. Some have read *Katz* as overruling *Olmstead.* It did not—*see Jones v. United States*, 132 S. Ct. 945 (2012), although it did introduce the "reasonable expectation of privacy" test that has come to dominate Fourth Amendment doctrine since. *Id.*

[76] *See Katz,* at 350-51. *But see* Griswold v. Connecticut, 381 U.S. 479 (1965). The Court in *Katz* did agree that a right to privacy under the Constitution applied with regard to some types of government intrusions, but interestingly, the Court did not cite *Griswold* for support. *Katz*, at 351.

[77] *See Katz*, 389 U.S. at 351 (citation omitted).

[78] *Id.* at 353-55. Interestingly, the phrase for which *Katz* has become most well-known, the "reasonable expectation of privacy," is actually found in Justice Harlan's concurrence, not the majority opinion. *See id.* at 360-61 (Harlan, J., concurring).

B. The Kyllo-Jones-Riley Trilogy

Despite the relative dearth of cases in which the Court addressed new developments in technology in the twentieth-century,[79] in the first decade and a half of the twenty-first century, the Court has tackled cases involving advanced technology at least three times.[80] And, despite the general tendency of the Rehnquist and Roberts Courts to favor law enforcement over defendants in cases involving criminal procedure,[81] the Court ruled for the defendants in each case, evincing in two of the cases an in-depth concern for the capabilities of the new technologies, as well as future technologies, and the threats they posed to the concerns of the Fourth Amendment.

The first case was *Kyllo v. United States*, a five-to-four decision in 2001.[82] *Kyllo* involved a challenge to the use of a

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[79] Beyond *Katz* and *Griswold*, the number of cases in which the Court faced challenges to new technological advances is limited, none having the notoriety or impact of *Katz.* Between *Olmstead* and *Katz*, the Court decided two other cases involving wiretaps—one involving a recording device and another involving a "spike mike." *See* Berger v. New York, 388 U.S. 41 (1967*)*; On Lee v. United States, 343 U.S. 747 (1952*)*; Goldman v. United States, 316 U.S. 129 (1942); Silverman v. United States, 365 U.S. 505 (1961). Following *Katz,* in the last third of the twentieth century, the Court picked up the pace a bit and ruled on use of a recording device, "beepers," and in three cases addressed the use of "flyover surveillance" by use of helicopters. *See* United States v. White, 401 U.S. 745 (1971); United States v. Knoll, U.S. 460 U.S. 276 (1983); United States v. Karo, 468 U.S. 705 (1984); California v. Ciraolo, 476 U.S. 207 (1986); Florida v. Riley, 488 U.S. 445 (1989); Dow Chem. v. United States, 476 U.S. 227 (1986). Of course, which cases make this list depends on how you define technology. One might also add to the list Smith v. Maryland, 442 U.S. 735 (1979), involving pen registers. We, however, draw the line at flashlights as a technological advance. *See* Texas v. Brown, 460 U.S. 730, 731 (1983).

[80] *See also* Maryland v. King, 133 S. Ct. 1958 (2013) (upholding the taking and analysis of an arrestee's cheek swab to test for DNA, on the theory that DNA represents a new technology, although the taking of the cheek swab does not necessarily involve technology).

[81] *See* Christopher E. Smith et al., *The Roberts Court and Criminal Justice: An Empirical Assessment*, 40 AMER. J. CRIM. JUSTICE 416 (2014); Erwin Chemerinsky, *The Roberts Court and Criminal Procedure at Age Five*, 43 TEXAS TECH. L. REV. 13, 21 (2010).

[82] Kyllo v. United States, 533 U.S. 27 (2001). The split in the Court was not along the usual ideological grounds, as three of the Court's usually reliably

thermal heat-sensing device by police that was used to search for the presence of high-intensity heat lamps in the defendant's home; such lamps were typically used for the growth of marijuana indoors. At issue in the case was a clash of two established principles of Fourth Amendment law: the notion that visual surveillance is generally acceptable and does not raise Fourth Amendment concerns, as opposed to the presumptively unconstitutional warrantless search inside a home.

In deciding that the interior of the petitioner's home had been breached, Justice Scalia, writing for the majority, stated that, "[i]t would be foolish to contend that the degree of privacy secured to citizens by the Fourth Amendment has been entirely unaffected by the advance of technology."[83] The Court noted that a search of the interior of a home is "the prototypical and hence most commonly litigated area of protected privacy," and concluded that "obtaining by sense-enhancing technology any information regarding the interior of the home that could not otherwise have been obtained without physical intrusion into a constitutionally-protected area . . . constitutes a search at least where (as here) the technology is not in general public use."[84] Rejecting an argument made by the government and the dissent that no search or seizure occurred because the heat sensing device had picked up only heat emanating from the house, Justice Scalia wrote that accepting that distinction

> [W]ould leave the homeowner at the mercy of advancing technology, including imaging technology that could discern all human activity in the home. While the technology used in the present case was relatively crude, the rule we adopt must take account of more sophisticated systems that are already in use or development.[85]

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liberal members joined Justices Scalia and Thomas in the majority opinion. *Id.* at 41.

[83] *Id.* at 33-34.

[84] *Id.* at 34 (citations and quotations omitted).

[85] *Id.* at 35-36.

A decade later, the Court took on new technology in the form of a GPS device that the government had surreptitiously attached to defendant's Jeep vehicle in *United States v. Jones*.[86] The Court, this time unanimously, sided with the defendant.[87] The government argued that the individual in *Jones* had no reasonable expectation of privacy in his car, and thus, the placement of the GPS device satisfied *Katz*.[88] In *Jones*, the technological aspects of the case were less important, as the case served as a vehicle to make clear that the *Katz* "reasonable expectation of privacy" test was one way to determine whether an unreasonable search or seizure had occurred, but that the test added to, and did not replace the more traditional theory premised on an entry into the defendant's home, or premises that had grounded Fourth Amendment law from the beginning. The Court held that by placing the GPS device on Jones' vehicle, the government engaged in the type of physical entrance or intrusion sufficient to constitute a search.[89]

Jones is something of the mirror image of *Olmstead*—a trip back down memory lane to legal principles of yore, except that in *Jones*, those legal principles invalidated the law enforcement action, rendering unnecessary further consideration of the technology involved. Interestingly, the GPS device in that case was used for surveillance, and thus the case presented an opportunity to consider the technology further. But the majority in *Jones* did not have to do so, and chose not to go further.

However, Justice Sotomayor, in a concurring opinion, did *not* let the opportunity pass.[90] For Justice Sotomayor, the proper analysis was not the physical entry to the home that was the basis of *Olmstead*, but the reasonable expectation of privacy test from *Katz*. And in that regard, the nature of the technology involved was central to the analysis. "[P]hysical intrusion is now

[86] 132 S. Ct. 945, 948 (2011).

[87] *Id.*

[88] *Id.* at 949-50.

[89] *Id.* at 949.

[90] *See id.* at 954 (Sotomayor, J., concurring).

unnecessary to many forms of surveillance,"[91] wrote Justice Sotomayor. She continued:

> With increasing regularity, the Government will be capable of duplicating the monitoring undertaken in this case by enlisting factory- or owner-installed vehicle tracking devices or GPS-enabled smartphones. In cases of electronic or other novel modes of surveillance that do not depend upon a physical invasion on property, the majority opinion's trespassory test may provide little guidance. . . .
>
> In cases involving even short-term monitoring, some unique attributes of GPS surveillance relevant to the *Katz* analysis will require particular attention. GPS monitoring generates a precise, comprehensive record of a person's public movements that reflects a wealth of detail about her familial, political, professional, religious and sexual associations. The Government can store such records and efficiently mine them for information years into the future. And because GPS monitoring is cheap in comparison to conventional surveillance techniques and, by design, proceeds surreptitiously, it evades the ordinary checks that constrain abusive law enforcement practices: 'limited police resources and community hostility.'[92]

Justice Alito also filed a concurring opinion, one in which Justices Breyer, Ginsburg and Kagan joined. The technology found in GPS devices was also an important consideration for Justice Alito, if somewhat less central than for Justice Sotomayor. Justice Alito offered how new technologies could affect the expectation of privacy in the *Katz* test:

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[91] *Id.* at 955 (Sotomayor, J., concurring).

[92] United States v. Jones, 132 S. Ct. 945, 955-56 (2011) (Sotomayor, J., concurring) (citations omitted).

> Dramatic technological change may lead to periods in which popular expectations are in flux and may ultimately produce significant changes in popular attitudes. New technology may provide increased convenience or security at the expense of privacy, and many people may find the tradeoff worthwhile. And even if the public does not welcome the diminution of privacy that new technology entails, they may eventually reconcile themselves to this development as inevitable.[93]

Echoing Justice Sotomayor, Justice Alito also expressed concern for how much information was now recoverable with new technology and how widespread, and relatively inexpensive, new technology made the gathering of evidence and the conduct of surveillance.[94]

Two years later, in *Riley v. California*,[95] the Court gave fuller voice to the concerns about technology raised by Justices Sotomayor and Alito in their concurring opinions in *Jones*. *Riley* actually presented a substantial legal question, but the opinion is noteworthy for its extended discussion of the new technology of smart phones.

Riley was a consolidation of two cases: one in which the defendant's smartphone was seized following an arrest, the other in which the defendant's less sophisticated and less capable flip phone was seized as part of an arrest.[96] At issue in both cases was whether the confiscations of the cell phones fell within the generally-accepted exceptions to a warrant found in the "search incident to arrest" doctrine. In those cases, warrantless searches are held not to run afoul of the Fourth Amendment if one of two conditions is met: if the search is necessary to protect the safety of the law enforcement officer; or

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[93] *Id.* at 962 (Alito, J., concurring).

[94] *Id.* at 963-64.

[95] 134 S. Ct. 2473 (2014).

[96] The Court did not make much of the distinction, generally referring to both types of phones as "cell phones." *See id.* at 2480.

if the search is necessary to prevent the destruction of evidence of a crime.[97]

In a unanimous opinion authored by Chief Justice Roberts, the Court in *Riley* rejected both justifications. The Court spent a relatively short time addressing the first exception, due to the perhaps self-evident observation that cell phones, particularly the data contained therein, do not generally pose a risk of physical harm to anyone, including police officers.[98] The Court spent more time, but not much more, concluding that there are enough options to protect information found on cell phones from tactics such as encryption or remote sweeps to delete information on the phones that the second justification does not hold up either.[99]

The *Riley* Court could have stopped there in insisting on the need for a warrant to conduct the searches inasmuch as neither of the grounds justifying a warrantless search incident to arrest were present.[100] But the Court went further, engaging in an extended discussion (longer than the space devoted to either of the search-incident-to-arrest exceptions) describing the reach of cell phones and the privacy interests implicated therein as part of a balancing of interests between law enforcement and the individual, not ordinarily found in Fourth Amendment cases.[101] The Court said that cell phones are "based on technology nearly inconceivable just a few decades ago" and are different than other things kept on a person's body during an arrest that might be searched in at least two ways.[102]

First, modern cell phones can store vast amounts of information, enough to basically reveal the basics of a person's

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[97] *Id.* at 2483 (citing Chimel v. California, 395 U.S. 752, 753-54 (1969)).

[98] *Id.* at 2485-86.

[99] *Id.* at 2486-88.

[100] *See Fourth Amendment—Search and Seizure—Searching Cell Phones Incident to Arrest—Riley v. California*, 128 HARV. L. REV. 251, 256 (2014) (The court could have stopped after concluding that neither exception applied: "[w]hen 'both justifications for the search-incident-to-arrest exception are absent . . . the rule does not apply.'").

[101] *See Id.* 255-58.

[102] Riley v. California, 134 S. Ct. 2473, 2484 (2014).

life: "The sum of an individual's private life can be reconstructed through a thousand photographs labeled with dates, locations and descriptions; the same cannot be said of a photograph or two of loved ones tucked into a wallet."[103] Pointing to the "pervasiveness" of cell phones, Roberts said:

> [I]t is not exaggeration to say that many of the more than ninety percent of American adults who own a cell phone keep on their person a digital record of nearly every aspect of their lives – from the mundane to the intimate. . . . Allowing the police to scrutinize such records on a routine basis is quite different from allowing them to search a personal item or two in the occasional case.[104]

The second way cell phones are different is the type of information that cell phones store. A search of a phone can reveal a variety of a person's private interests such as health issues, political affiliations or interests, religious beliefs and details about one's intimate lives. On this point, the *Riley* Court concluded,

> [A] cell phone search would typically expose to the government far more than the most exhaustive search of a house. A phone not only contains in digital form many sensitive records previously found in the home; it also contains a broad array of private information never found in a home in any form – unless the phone is.[105]

The Court also noted that, through "cloud computing," the search of a cell phone contains data information that may not even be on the phone itself.[106]

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[103] *Id.* at 2489.

[104] *Id.* at 2490.

[105] *Id.* at 2491.

[106] *Id.*

Roberts concluded his opinion as follows:

> Modern cell phones are not just another technological convenience. With all they contain and all they may reveal, they hold for many Americans 'the privacies of life' . . . The fact that technology now allows an individual to carry such information in his hand does not make the information any less worthy of the protection for which the Founders fought.[107]

The immediate reaction to *Riley* had many treating it as a landmark decision, a game-changer. One assessment of the case claimed that *Riley* brought the Fourth Amendment "into the digital age" and "signals a Court more prepared to engage in the challenges of the digital age ahead."[108] Another commentator similarly enthused:

> In a nearly unanimous opinion packed with references to gigabytes, apps and the cloud, Chief Justice John Roberts proved that the Justices get it. They get that digital technologies are different from anything our culture has seen before. They get that people are using those technologies in a million dynamic ways that were unimaginable a generation ago. And they get that, in at least some contexts, the Old Rules need to change.[109]

Observers expressed great confidence that the Court has started down a path from which it could not go back, and that

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[107] *Id.* at 2494-95.

[108] Marc Rotenberg & Alan Buter, *Symposium: In Riley v. California, A Unanimous Supreme Court Sets Out Fourth Amendment for Digital Age*, SCOTUS BLOG (May 25, 2016, 3:35 PM), http://www.scotusblog.com/2014/06/symposium-in-riley-v-california-a-unanimous-supreme-court-sets-out-fourth-amendment-for-digital-age.

[109] Richard M. Re, *Symposium: Inaugurating the Digital Fourth Amendment*, SCOTUS BLOG (Jun. 26, 2014, 12:37 PM), http://www.scotusblog.com/2014/06/symposium-inaugurating-the-digital-fourth-amendment/. *See also* Andrew Pincus, *Evolving Technology and the Fourth Amendment: The Implications of Riley v. California*, in 14 CATO S. CT. REV. 307, 308 (2014).

other and future technologies, such as emails and tablets would similarly receive protection.[110]

C. Some Further Thoughts

Notwithstanding the enthusiasm with which some have greeted *Riley*, three cases is too small a sample to draw any definite conclusions with any great confidence, but we can suggest some tentative thoughts. First, the three cases might be outliers and not part of any new trend at all. Perhaps *Riley* is the last case the Court will take dealing with new technologies for another forty years (the same span between *Olmstead* and *Katz*) and the next case after that will be twenty or forty years beyond that. Or, the three twenty-first century cases might simply reflect the personal interests of the Justices currently sitting on the Court (recognizing that the composition of the Court changed somewhat between *Kyllo* and *Jones*). If that is what explains the three cases, one thing that can be said with great confidence is that the personnel of the Court will change, perhaps even dramatically over the next decade. Whether the new Justices, whoever they may be, are concerned about technology cannot be known.

But maybe something more is at work. It is possible that as technology expands and becomes even more intrusive and impressive, the Court, as shown in Justice Roberts' extensive discussion of the reach and implications of smartphone technology, *must* take on the new challenges. Of course, whether the Court will become more involved in addressing the privacy concerns posed by the new technologies is only one of many questions. Another, perhaps even more important question is whether it should.[111] We leave that question for another day.

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[110] Re, *supra* note 109.

[111] *See* Kerr, *supra* note 59; Slobogin, *supra* note 30.

VI. FINAL THOUGHTS: VIDEO SURVEILLANCE AND BEYOND IN THE TWENTY-FIRST CENTURY

We note in our introductory remarks that our exploratory research into video surveillance had dual goals of allowing us to both hypothesize about surveillance issues specifically, while also giving us license to speculate and hypothesize about privacy issues more generally. Obviously, other more specific privacy arenas, for example, data collection, personality testing, GPS tracking, and so on, have their own concerns, and it is difficult to conclusively generalize about any or all of these. However, we have learned lessons from our narrow study that we do believe inform future discussion of the "right to privacy" going forward, including what courts may conclude about the "reasonable expectation of privacy." In this final section, we will offer generalizations anchored in what we have learned in a scope broader than a discussion only tied to surveillance issues.

To clarify, we are not systematically reviewing or crafting policy proposals to address in specific or general ways the concerns raised by the focus group participants or the concerns held by the authors. What we will do is raise some of the broad matters our research has uncovered in the surveillance area, and in almost every instance, we think these apply more generally to privacy issues in other settings.

So what are these "broad matters?" Perhaps the most intriguing of these is the ways privacy values may have been "traded off" for other goals without much systematic reflection about these tradeoffs. One of our focus group participants presciently captured this change by noting that the exponential growth in camera surveillance took place while "we were asleep at the wheel."[112] As noted, the young groups did not seem to even know a world without the street surveillance; the middle and older groups found that it just "seemed to happen" before they ever made a careful study of pros and cons. Forces, for example, safety, terrorism, crime, combined with technological innovation are inevitably enough to overcome minimal objections and to escalate the almost exponential growth of surveillance. As we saw earlier, there might have been some

[112] Focus Group O2, *supra* note 31.

concern when cameras were initially proposed,[113] but this concern dissipates over time, and the powerful slippery slope succeeds in facilitating more intense kinds of surveillance mechanisms. Though Lawrence Tribe was writing of digital surveillance in addition to video surveillance, his observations about how this seemingly "just happens" and the consequences of it "just happening" reach the heart of the matter succinctly:

> The more people grow accustomed to a listening environment in which the ear of Big Brother is assumed to be behind every wall, behind every e-mail and invisibly present in every electronic communication, telephone or otherwise—that is the kind of society, as people grow accustomed to it, in which you can end being boiled to death without ever noticing that the water is getting hotter, degree by degree.[114]

Policy decisions that increase video surveillance are often driven by media events and intense public focus/fear of a particular danger, for example, watching a news report of a robbery that happened in your neighborhood. These events may drive an increase in surveillance, but they are often unaccompanied by the introspective evaluation of what people are willing to give up in exchange for the increased security provided by increased surveillance.

Our discussions across the six groups did not lead us to believe the public is not interested in potential privacy threats. But what it did lead us to believe was that there is enormous apathy among the public—and attraction to the positive contributions of developments potentially intrusive to privacy—that facilitated this "just happening" dynamic. Members of the young groups almost emphatically felt cameras on the street "not to be a problem." Their reason: they had a sense that no one really looked at the data. If they had not committed a crime,

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[113] For example, some initial concerns regarding the introduction of public surveillance.

[114] Bob Herbert, *What's Left Unsaid*, N.Y. TIMES (Jan. 23, 2006), http://www.nytimes.com/2006/01/23/opinion/whats-left-unsaid.html. Note that Justice Alito made the same point in United States v. Jones, 132 S. Ct. 945, 963 (2012).

their feeling was that there simply is so much being recorded, and so few people to actively review it, that "being on camera" was not a real problem for them. These respondents were not in any way troubled by any theoretical privacy problem we raised; as noted earlier, so many of their daily routine practices on their smart phones touched upon so many more major privacy matters, and the respondents seemed to have all opted to not give privacy primacy.[115]

A number of our participants left the group sessions and reported that we had made them much more sensitive to these privacy matters, since their few hours with us were the most they had thought about privacy and surveillance in their lives. As these surveillance tools were being introduced throughout their lives, few, if any reflected at the time on the tradeoffs—most were seduced by the benefits, and almost all were apathetic. The technological advancements crept up without much reflection, and the public was simply not engaged nor concerned about lofty privacy matters.[116] It would be fascinating to track if a similar path is true about other potential privacy tradeoff areas—for example, growth of drug testing in schools and workplaces, collection of more and more information about more and more matters, etc.

Relatedly, we found that there had been an almost complete reversal in public expectations about surveillance. One respondent labelled this the "CSI" effect—the notion that citizens *expect* there to be surveillance tapes of situations in which they think a record ought to be kept. A prominent

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[115] Any concerns that we did observe were more theoretical reflections than actual expressions of current fears. For example, occasional questions would be raised about public surveillance, who was doing the monitoring, who could get access to the recordings, and for how long these could be kept. Increasingly, it is possible to gain access to one's nanny cam from a remote location, and surveil in real time from afar, as through one's smart phone. Other respondents were concerned with the potential for someone to hack into these recordings.

[116] *See* Peter Baker, *In Debate Over Patriot Act, Lawmakers Weigh Risks vs. Liberty,* N.Y. TIMES (June 1, 2015), http://www.nytimes.com/2015/06/02/us/politics/in-debate-over-patriot-act-lawmakers-weigh-risks-vs-liberty.html?_r=0 (discussing recent Patriot Acts revisions, as well as more recent comparative examples come from the political climate in France following the terrorist attacks in Paris in January and November 2015). *See also* Alissa J. Rubin, *Lawmakers in France Move to Vastly Expand Surveillance*, N.Y. TIMES (May 5, 2015), http://nyti.ms/1chVkQY.

prosecutor in a major east coast city told us that jurors now view the video record as kind of a "smoking gun" against the defendants.[117] Videos are the new fingerprints, this prosecutor reported;[118] it is almost as if the burden of proof now includes an assumption that if the video is not provided, the state's case is markedly weakened. Similarly, a hotel manager who made a policy decision to limit his surveillance cameras to the entrance of the hotel and to the registration desk for safety reasons but not to the hotel corridors, lest they intrude on privacy, found that guests almost demanded video footage of the corridors if a belonging went missing.[119] This may of course have been something they lost, but they could not imagine an organization which could not provide a steady stream of video on all that had transpired in their corridors (or they at least felt this way when they needed the cameras).[120]

The "new normal" today with respect to privacy was probably unimaginable in some of the path-breaking novels and academic books of the twentieth century. Think Orwell's *1984* [121] or Alan Westin's *Privacy and Freedom*,[122] the then-definitive academic study of the privacy landscape in 1967. Would they have imagined the world described by Justice Roberts in his majority opinion in *Riley*, a case dealing with cell phone searches, when he noted that, "[t]hese cases require us to decide how the search incident to arrest doctrine applies to modern cell phones, which

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[117] *See* Interview with *unnamed* District Attorney, State of New York, Rutgers Univ. (Feb. 28, 2015) (on file with author).

[118] See *id.*

[119] *See* Interview with *unnamed* Hotel Manager, Rutgers Univ. (Feb. 17, 2015).

[120] *See* Thomas L. Friedman, *Four Words Going Bye-Bye*, N.Y. TIMES, May 21, 2014, at A29. Friedman wrote that he even feels the word "privacy" will be "dropped from our vocabulary." *Id.* In fact, it is assumed that we are now always on "Candid Camera," a lesson that Donald Sterling of the Los Angeles Clippers learned after a video of him yelling racist statements went viral. *See Clippers Owner Donald Sterling to Girlfriend: Don't Bring Black People to My Games*, TMZ (Apr. 25, 2014), https://www.youtube.com/watch?v=YhT6d5f MhzI.

[121] *See* ORWELL, *supra* note 4.

[122] *See* Westin, *supra* note 1 (1967).

are now such a pervasive and insistent part of daily life that the proverbial visitor from Mars might conclude they were an important feature of human anatomy."?[123] And just like today's new normal was unimaginable in the past century, we encountered in our research anecdotal suggestions of how today's new normal is already being pushed in new, once again, hard to imagine directions (and we are just speaking about surveillance). Drones are already rapidly taking a place in the surveillance world[124] and will likely be a major consideration in future discussions of tradeoffs between privacy and surveillance. Alone or in combination with drones, it is certain that the use of facial recognition software will also expand in all kinds of still-unimaginable directions. We already see this technology being used to assess the value of college and other professional basketball players for a roster[125], or by marketers trying to gauge consumer satisfaction with particular products,[126] or by computer companies contemplating using facial recognition as an alternative to written passwords,[127] or by Harvard in classrooms to monitor student attendance without faculty or student permission,[128] or by administrators in classrooms in

[123] Riley v. California, 134 S. Ct. 2473, 2495 (2014) (holding that the warrantless search and seizure of the contents of a cell phone by an arresting officer is unconstitutional).

[124] *See* Hillary B. Farber, *Eyes in the Sky: Constitutional and Regulatory Approaches to Domestic Drone Deployment*, 64 SYRACUSE L. REV. 1 (2014) (offering a comprehensive summary of the recent literature on drones and drone surveillance).

[125] *See, e.g.,* Kevin Randall, *Teams Turn to a Face Reader, Looking for That Winning Smile*, N.Y. TIMES, Dec. 26, 2014, at A1.

[126] *See* Jeffrey Kluger, *The New Tool for Marketers: Your Face*, TIME (Mar. 19, 2015), http://time.com/3750543/facial-analysis-marketers/.

[127] *See* AFP, *Windows 10 devices to Allow Sign In With Face, Iris*, DAILY MAIL (Mar. 17, 2015), http://www.dailymail.co.uk/wires/afp/article2999381/Windows-10-devices-allow-sign-face-iris.html.

[128] *The Sanctity of the Classroom, Continued: More Disclosures of Surveillance in Harvard Classrooms*, Background, HARV. MAG. (Dec. 3, 2014), http://harvardmagazine.com/2014/12/more-disclosures-of-surveillance-in-harvard-classrooms.

China to detect student cheating.[129] And these, themselves, as well as other surveillance-related issues—private surveillance,[130] with, among other things cell phone pictures and the incredibly high resolution of drone and satellite camera[131]—are probably not nearly as consequential in terms of what will change in the surveillance world as they seem to us in 2016. One of our favorite pastimes after we completed our examination of the focus group data was to try to imagine what comparable groups would say in twenty years. What will be 2036's "New Normal"? We could not help but believe that no matter how much we let our minds conjure a future of new surveillance technology, we would fall miserably short of what the reality would be. This is at least the conclusion that we necessarily reached by appreciating the lightning growth of technology over the past few decades and the seemingly inexorable expanded use of these technologies in the "technology creep" mode of acceptance described above.

By design, we have not engaged in an extended discussion of the values attendant to a "right to privacy." We began—and still embrace—the original definition of the right, so elegantly and simply summarized by Brandeis and Warren in "The Right to Privacy," as the right to be left alone.[132] And we remain subscribers to the oft observed values of privacy, and the asserted costs of losing it. Neil Richards, for example, recently

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[129] *Drone Deployed to Catch Cheating Chinese Students*, ASSOCIATED PRESS (June 8, 2015), http://www.aljazeera.com/news/2015/06/drone-deployed-catch-cheating-china-students-150608075147614.html (explaining that drones were flown over students at a testing cite as they took the important state-wide university entrance exam to prevent students from cheating).

[130] *See* Belson, *supra* note 3. Consider elevator pictures of Ray Rice, and impact that these had on story that had already been previously told without pictures. *See* Childs Walker, *One Year After Ray Rice Incident, Impacts Abound Ravens, NFL, Domestic-Violence Activists*, THE BALTIMORE SUN (Feb. 15, 2015), http://www.baltimoresun.com/sports/bs-sp-ray-rice-one-year-20150214-story.html. The old adage, "a picture is worth a thousand words" is an understatement in this case.

[131] *See, e.g.,* Danny Hakim, *Eyes in the Sky, for Hire*, N.Y. TIMES, Jan. 26, 2016, at B1.

[132] Louis Brandeis & Samuel Warren, *The Right to Privacy*, 4 HARV. L. REV. 193 (1890).

observed that "[b]eing watched deters us from the kind of free and fearless inquiry on which political and personal freedoms depend."[133] David Brooks seemed to agree when he stated that "there has to be a zone where half-formed thoughts and delicate emotions can grow and evolve, without being exposed to the harsh glare of public judgment."[134] And along similar lines, (also including electronic surveillance) Kate Murphy argued that "just the perception, let alone the reality, of being watched results in feelings of low self-esteem, depression, and anxiety."[135] Political theorists, as well as social scientists, of course have also offered many different perspectives on privacy, including Foucault's famous discussion of Panopticon surveillance, and its implications.[136]

Books could be written (and have been written) on the values of privacy, the putative costs of its undermining, and the reasons for the balancing of privacy interests against other interests (the now familiar list of security, efficiency, etc.). The present study is just a modest step to gather empirical data on the ways one category of technological innovation—surveillance cameras—are viewed in the eyes of the public. Contrary to the easily surfaced horror stories that can be constructed about the horror of the shrinking of the private domain, we did not find that this characterizes our groups' reactions. It certainly did not characterize their reactions to the steady "progress" surveillance

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[133] Neil Richards, *The Electronic Panopticon*, CHRON. OF HIGHER EDUC. (Mar. 16, 2015), http://chronicle.com/article/The-Electronic-Panopticon/ 228419.

[134] David Brooks, *The Lost Language of Privacy*, N.Y. TIMES, Apr. 14, 2015, at A23.

[135] Kate Murphy, *We Want Privacy, but Can't Stop Sharing*, N.Y. TIMES, Oct. 4, 2014, at SR4.

[136] Foucault's "Panopticon theory" predicts changes in behavior due to surveillance. *See* MICHEL FOUCAULT, *Discipline & Punish: Panopticism*, in DISCIPLINE & PUNISH: THE BIRTH OF THE PRISON 195, (Alan Sheridan ed., 1975). There is also empirical data on this matter: Researchers have found in various experiments that subjects wearing sunglasses or placed in dark settings are less generous and moral than those in clear glasses or in lit settings. *See* Jonathan Sacks, *Assembling Reminders*, COVENANT & CONVERSATION (2015), http://www.rabbisacks.org/assembling-reminders-shelach-lecha-5775.

has made in public streets and in home surveillance, though respondents did seem somewhat more ambivalent about cameras in the workplace. Their acceptance of surveillance at the cost of some privacy was in part an attraction to the positive consequences of surveillance, but it was also something much more prosaic—indifference to technology's advances. When we made salient some of the "costs" of surveillance, we sometimes felt that these were issues never heretofore confronted. Benefits of *surveillance* soundly trumped other concerns, and what appeared to begin as trickle of innovations quickly became a substantial part of today's New Normal.

We noted earlier that this paper's goal was an empirical examination of attitudes toward surveillance and emphatically not a screed to deplore the seemingly inevitable shrinking of the "right to privacy." Technology brings laudable gains, and only a Luddite would not be open to some of these promises. Yet, though we understand the tradeoffs, and applaud some, the data suggest that the public has not really undertaken the hard kind of balancing that maybe ought to be required as new norms loom. The benefits of surveillance may be as assumed or not (think deterrence), but the public should be part of this balancing. There is one idea that we think has gotten heretofore too little attention—namely that along with the positive benefits surveillance offers, there coexists the fundamental core principle of due process. The potential for technology to record every moment of our lives can come into conflict with our Constitutional values, and there needs to be a discussion about this conflict. These may be procedural—due process is at the heart of how we conduct our affairs; or it may be an attachment to a protected right—here "privacy." Surveillance on the streets, or in the home, or in the workplace can yield valuable products but in our system we necessarily limit these gains by the ways we go about obtaining them. We keep a healthy respect for the protected rights that must be balanced against otherwise laudable goals. Innovations in surveillance technology, data collection, storage, and dissemination will be beyond spectacular in our near future. And these innovations will appear to, and may make, many aspects of life more efficient, fairer and better. Our limited study here suggests that the public will readily embrace these gains –whether real or perceived as being desirable. Technology will march on, but the due process values and the underlying right to privacy must be

carefully weighed against technology's promise.[137] It is important that this required balancing become salient for up-to-now a largely apathetic public.[138]

Justice Roberts gave us a reminder of this very point in Riley. He acknowledged the potential benefits of technology, but his comments are very important reminders about the imperative of weighing these benefits against the fundamental ways our system requires we go about our business, and about the core rights that enrich our system. Justice Roberts wrote:

> We cannot deny that our decision today [generally requiring a search warrant before searching a defendant's cell phone] will have an impact on the ability of law enforcement to combat crime. Cell phones have become increasingly important tools in facilitating coordination and communication among members of criminal enterprises, and can provide valuable incriminating information about dangerous criminals. Privacy comes at a price.[139]

Yes, privacy does come at a price, and our exploratory study suggests that the public believes the price has not been high—so far.

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[137] *See, e.g.*, Michael D. Shear et al., *In the Apple Case, a Debate Over Data Hits Home*, N.Y. TIMES (Mar. 13, 2016), http://www.nytimes.com/2016/03/14/technology/in-the-apple-case-a-debate-over-data-hits-home.html.

[138] As Elana Zeide, a privacy expert at New York University's Information Law Institute stated: "We're really just starting to sort out the risks and rules for digital security and data collection and use." Steve Lohr, *At Berkeley, a New Digital Privacy Protest*, N.Y. TIMES, Feb. 1, 2016, at B1. The same can be said about video surveillance and the legal considerations that must be evaluated moving forward.

[139] Riley v. California, 134 S. Ct. 2473, 2493 (2014).