2.1: Hollingshead, Carnevale: Psychological Dynamics of Video Surveillance for Public Security

This project investigates methods for, and outcomes of, video surveillance of public spaces. The key deliverables include: (1) a general framework for assessing the impacts of video surveillance methods as a deterrent to security threats from the perspective of the general public; and (2) effective communication and deployment strategies to increase video surveillance awareness and promote community acceptance.

Theme Area: Risk Perception and Communication
Principal Investigator: Andrea B. Hollingshead
Institution: USC Annenberg School for Communication and Journalism
Co-Investigator: Peter J. Carnevale, USC Marshall School of Business,
Research Transition Lead: Andrea B. Hollingshead
Keywords: Surveillance, counterterrorism, privacy

Brief Description: Surveillance is the process of gathering information about people and behavior. As a component of a public security system, video surveillance (CCTV) has the potential of deterring or mitigating threats, aiding in solving crimes, and enhancing perceived safety. As a case in point, the Tsarnaev brothers were identified as the main suspects in the 2013 Boston Marathon bombing less than 24 hours after the FBI released photos and a surveillance video of the crime scene; within another 24 hours, one brother was dead and the other was in police custody. A New York Times/CBS News poll conducted about a week after the Tsarnaev arrest indicated that 78% of Americans were generally in favor of video surveillance in public spaces. Why is it not 100% acceptance? The Pew Research Report 2014 found that subtle questionnaire wording for questions about attitudes toward government surveillance found that having the words “With court approval” in the text of the question had a positive impact on approval ratings. Will such wording changes on surveillance notices in public spaces have parallel effects? Video surveillance raises many questions, including questions of privacy and individual rights, 4th Amendment concerns, and the responsibilities of law enforcement and others who have access to videos. What is the best way to signal to the public that surveillance is underway? Are there circumstances wherein surveillance signals should not occur? However, hidden surveillance diminishes the deterrent element of surveillance.

Video surveillance of public spaces is here to stay. It will likely increase in sophistication and fidelity. However, little empirical behavioral research speaks directly to the impact of video surveillance in public spaces, its effectiveness as a deterrent, and the conditions that influence community acceptance. In addition, there are scant theoretical or practical frameworks for understanding surveillance across practical, legal, political and social contexts. This proposed research will provide such frameworks.

Research Objectives: The proposed research tests the general proposition that the manner in which video surveillance is perceived and communicated in public spaces has a significant impact on crime deterrence and community acceptance. The main objective is to apply scientific method to understanding the potential attitudes and impacts of video surveillance of public areas. The proposed studies taken together address the following sets of questions: (1) What impact do surveillance signals, e.g. posted
signs and wording on posted signs, have on individual perceptions and behavior? Does making the public aware of video surveillance deter potential perpetrators from committing crimes in those public spaces? Will it make the public feel safer in those spaces? Will they be more or less vigilant in attending to their surroundings? What unintended positive or negative consequences result from making people aware of video surveillance? (2) Does the manner in which video surveillance is communicated to the public affect its acceptance? Does this vary as a function of gender and social group (e.g., African American, Anglo American, Asian, Latino)? Can the video surveillance of public spaces be communicated so that it meets legal concerns and is accepted by all social groups?

This research will provide (1) a general framework for assessing the impact of public surveillance methods as a deterrent to security threats and (2) effective communication and deployment strategies to increase awareness and acceptance of video surveillance and behavioral effects. It will also identify guidelines for legal issues as well as jurisdiction parameters and assess psychological dynamics of public responses to and acceptance of video surveillance. Taken together, this research will contribute to improving the effectiveness and communication of counterterrorism and counter-crime measures.

**Research Transition Objectives:** We will work in close collaboration with DHS personnel to develop a set of theoretically and empirically based guidelines about video camera surveillance in public spaces that will deter criminal activity, increase public safety, and generate broad acceptance across community groups.

**Interfaces to CREATE Projects:** The proposed research complements those projects listed under Risk Perception and Communication. In particular, the CREATE project conducted by Dillon, Lester, John, and Tinsley (2012) is relevant. The essential matter is how to quantify debate about domestic intelligence activities and provide a framework for policy decision makers to make informed decisions. Dillon et al. (2012) investigated six domestic intelligence alternatives (one of which was automated surveillance in public locations), the locus of disagreement among individuals in a multiattribute utility model, and the notion that respondents place different weights on decision parameters. The project proposed here is informed by the modeling pioneered by Edwards, Keeney, von Winterfeldt, and others (Keeney & von Winterfeldt, 2011). The various ways in which surveillance is communicated, we believe, can be assessed in a value-focused framework such as developed by Dillon et al. (in particular, as indicated in their Appendix, pages 726-727). The CREATE project by Sellnow (2013) on inoculation strategies for risk communication messaging is also relevant. Our project also involves the development and testing of effective messaging strategies. The key difference between the two projects is the communication context. Our project examines messaging about video surveillance, a counterterrorism measure, and the Sellnow project examines messaging about terrorism event risk and response.

**Major Deliverables, Research Transition Products and Customers:** This research will provide (1) a general framework for assessing the impact of video surveillance methods as a deterrent to security threats and (2) effective communication and deployment strategies to increase awareness and acceptance of video surveillance and behavioral effects. This research will also identify guidelines for legal issues as well as jurisdiction parameters and assess psychological dynamics of public responses to and acceptance of video surveillance. Primary clients include DHS individuals interested in implementing surveillance. Other clients include law-enforcement individuals interested in surveillance of public spaces, and crime deterrence. In particular, research transition will be relevant to the Critical Infrastructure/ Key Resources
(CI/KR) areas as defined by DHS, including protection of commercial facilities, national icons and monuments, dams, and transportation systems.

**Technical Approach:** The focus of this proposal is on the psychological dynamics of video surveillance in public spaces. We are primarily interested in discovering how awareness of video surveillance in public areas might affect the incidence of criminal and terrorist activity, safety-related attitudes and behaviors, and community acceptance by various social groups. It is important to consider the issue of video surveillance awareness and outcomes from the viewpoints of multiple stakeholders to identify possible risks, weaknesses, and barriers as well as strengths and benefits (Ratcliffe, 2006; Rushin, 2011; Stutzer & Zehnder, 2013; Wang, 2013).

The general hypothesis to be tested is that the language and manner in which information about video surveillance is conveyed to the public affects the incidence of criminal activity, safety-related attitudes and behaviors, and community acceptance. Many studies indicate that people who feel they are being watched act in more socially responsible ways. Providing a mirror, being watched by “a robot” or even the simple image of an eye can increase individual’s self-awareness and lead them to act more cooperatively (e.g., van Bommel, et al., 2012). For example, simply placing signs with watching eyes and a related verbal message can reduce the incidence of bicycle (Nettle, Nott, & Bateson, 2012).

In addition, research in political science and communication has examined the role of language and public opinion, which clearly demonstrates that the language used to frame policy can have a strong impact on public opinion (Entman, 2004). In addition, at a more micro level, social influence experiments demonstrate that the same message framed differently can have a dramatically affect individual and social behavior (Goldstein, Cialdini & Griskevicius, 2008). In our research, we will examine whether framing the presence of video cameras in public areas as “surveillance” vs. “public security” is consequential for deterrence, perceptions of risk and personal safety, and community acceptance. It is quite possible that various frames may have differential effects: for example, a surveillance frame may deter criminal activity, but may also be met with less community acceptance, particularly by minority groups who may believe they are the targets of that surveillance.

**Research Site.** Our research site is the University of Southern California (USC) main campus. The USC campus and community experiences significant criminal activity, which includes the murders of three USC graduate students since 2012. Criminal activity in the area continues despite the more than 170 security cameras and license plate readers deployed in and around the USC campus. There is currently no signage indicating the presence of cameras, and they are often hidden from view. People who live in or visit the area are largely unaware that they are under video surveillance. According to the LA Times, the four suspects arrested in the July 2014 murder of a USC graduate student reported being unaware of the vast video surveillance network deployed in the neighborhood surrounding the campus, which played a large role in their arrest (July 29, 2014). Our research will provide insight into whether awareness about video surveillance leads to positive outcomes such as deterring criminal activity and improving community safety, and the special issues that must be considered in its deployment.

**Phase 1: Interviews.** This project will begin with a 360-degree investigation of issues surrounding video surveillance in public spaces with key stakeholders. This investigation will involve interviews with people who are conducting the video surveillance and those whose actions are being recorded. The
sample will include DHS personnel, local law enforcement, university attorneys, and the various groups that make up the general public.

We will interview selected DHS representatives (identified by DHS leaders affiliated with CREATE) to identify important concerns regarding video surveillance in public spaces. We will evaluate the current state of the art on how decisions are made regarding surveillance communications including technical matters as well as societal concerns. We plan to interview 6-8 individuals.

We will also talk with USC Department of Public Safety administrators and USC attorneys to find out about the legal and practical considerations surrounding the issue of video surveillance awareness in and around the USC campus, and how they might be addressed through the placement and language of signs in public areas. We plan to interview at least 5 people from this group.

We will also interview different community stakeholders in and around the USC campus about video camera security. The interviewees will include USC students, local business owners, and community residents who are not affiliated with USC. We will discuss the issue of video cameras in public spaces, the benefits and drawbacks of video cameras, and generate ideas for increasing public awareness and acceptance of video cameras in their neighborhood. We will also ask about safety related attitudes and behaviors.

**Phase 2: Surveys.** From the interview data, we will create and distribute online surveys with a large representative sample from the USC community (undergrads, grad students, business owners, community residents to explore key issues identified from Phase I with a large representative sample.

**Phase 3: “Video Surveillance in Public Spaces” Framework.** From our interview and survey data, we will create a framework that will identify guidelines for addressing legal issues, jurisdiction parameters, and predicting public responses to video surveillance.

**Phase 4: Research Transition Plan:** Hollingshead will consult with CREATE staff about effective strategies to make the framework and findings useful to DHS.

**Timeline:**
1. Phase 1: Interview Study DataCollection, Analysis and Interpretation Aug , 2015 – Jan 2016;
2. Phase 2: Survey Study Jan-Mar 2016;

**References:**


