

## **Perception of Surveillance: An Empirical Study in Turkey, USA, and China**

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### **Abstract**

Information Technology (IT) practices of governments today is under scrutiny due to some malpractices causing violation of citizens' privacy. Especially, surveillance practices such as CCTV surveillance and surveillance of Internet and telephone traffic are seen as the most prevalent threats to civil rights and liberties. With a cross-cultural survey covering three countries including Turkey, USA, and China, this study tries to find out how university students perceive various surveillance practices (CCTV, telephone and Internet surveillance) in their country. The survey was conducted with the participation of undergraduate business administration students from Turkey (Hacettepe University), USA (University of Massachusetts), and China (Huazhong Agricultural University). Results indicate that security cameras in campus, workplace, and streets are not perceived as a threat to civil rights and liberties. Nevertheless, surveillance of internet, e-mails and telephones is not positively evaluated by students.

**Keywords:** Information Technology, Surveillance Technologies, Privacy, Surveillance Society

## **1. Introduction**

Information Technology (IT) transformation in government can be seen as a revolution in terms of quality and cost of public services. However, it is also a reality that governments' use of IT may pose a threat to civil rights and liberties. In the last decade, there is an abundance of news in the media regarding with the continuing assault on citizens' privacy arising from some Information Technology (IT) applications. The most critical part of IT use is related to surveillance activities. Surveillance is the monitoring of the behavior, activities, or information for the purpose of influencing, managing, directing, or protecting (Lyon, 2007). In fact, surveillance is a highly complicated issue with its positive and negative sides. It generally involves observation of individuals or groups by government organizations. The word surveillance generally refers to observation from a distance by means of electronic equipment (such as closed circuit television- CCTV), or interception of electronically transmitted information (such as Internet traffic or phone calls). These surveillance categories (CCTV, Internet and telephone) will also be the subject of this study. In the empirical part, attitudes of students towards those technologies will be analyzed in depth.

## **2. From Terrorist Attacks to School Shootings: Surveillance to Fight Against Violence**

In the last few decades, our world has witnessed a rising tendency in international terrorism all over the world. There have been important terror acts in western countries that caused a total paradigm change in security perception: Attack towards twin towers in the US on September 11th, 2001 and subway and bus bombings in London on July 7th, 2005 were the most important violent acts hurting innocent people in Western countries. After those events, the power of security forces in the developed world was increased significantly to fight against terrorism effectively. In addition to the threats arising from terrorism, there had been a rise of violent acts on the streets in urban life. University campuses are also among the places that are highly affected by such kind of criminal behavior.

In terms of school violence, USA is one of the most influenced countries among all. Columbine and Virginia Tech massacres can be seen as milestones in this category. The Columbine High School massacre was a school shooting which occurred on April 20, 1999, at Columbine High School in Columbine, an unincorporated area of Jefferson County in the State of Colorado, USA. Two students murdered a total of 13 people and wounded 21 students (Toppo, 2009). The Virginia Tech massacre was another important event that has an affect on security paradigm in USA. It took place on April 16, 2007, on the campus of Virginia Polytechnic Institute and State University in Blacksburg, Virginia, United States. A student had killed 32 people and wounded 17 others in two separate attacks. The massacre was the deadliest shooting incident by a single gunman in US history (Virginia Tech Report, 2009).

The United States Secret Service released a comprehensive study entitled Campus Attacks: Targeted Violence Affecting Institutions of Higher Education in 2010 (Drysdale, Modzeleski, and Simons, 2010). This study was done pursuant to the Virginia Tech incident and at the request of various departments within the federal government. According to report;

1. A total of 174 homicides or non-negligent manslaughter occurred from 2005 through 2008,
2. 13,842 forcible sex offenses occurred during this same time period,
3. 36% took place in administrative/academic/service buildings; 28% took place in residential buildings; 27% took place in parking lots or other campus grounds.

Figures show the urgent need to curb crime by using all kinds of tools in hand effectively [see also School Crime and Violence Statistics published by National School Safety Center in USA (NSSC, 2010)]. At this point, there have been a natural increase in surveillance measures taken by the universities not only in USA only, but also all over the world and CCTV is one of the most prevalent surveillance technologies in university campuses today.

Various aspects of CCTV use have been analyzed in many studies (Gras, 2005; Hempel and Töpfel, 2004; Hempel and Töpfel, 2009; Welsh and Farrington, 2007; ACLU, 2006; Urbaneye, 2004; Gill, 2003; McCahill and Norris, 2002a; McCahill and Norris, 2002b; McCahill, 2002; Norris and Armstrong, 1999; Norris, et al. 1998).

The Urbaneye Project, one of the most significant of studies analyzing citizen attitudes towards CCTV, was conducted with the participation of approximately 1,000 respondents in five different European countries (Hempel and Töpfel, 2004). Most people have positive opinions towards CCTV at the banks, station platforms, shops, shopping malls, along motorways and on open streets. In contrast, some people express negative opinions towards CCTV in public toilet washrooms, changing and fitting rooms. Although the general characteristic of the spaces where CCTV is clearly opposed can be easily described as more intimate, it is difficult to find a common denominator for the locations where CCTV is supported. Some of those locations might be seen as mono-functional or less “social”, hence, intimidating spaces, such as station platforms. In the others, people might sympathize with the interests of property owners who might want to protect their assets. Or, people might simply recognize the “power of facts” when they support CCTV at the banks or in stations (Hempel and Töpfel, 2004: 43). When it comes to telephone and Internet surveillance, people again support the use of these technologies as long as security agencies comply with the laws and regulations.

With a similar approach, in this study, we tried to understand the attitudes of students towards CCTV, telephone and Internet surveillance in their countries (Turkey, USA, and China). In the following part of the study, this empirical research is presented and findings are discussed.

### **3. Empirical Research**

To search the effects of surveillance practices, an empirical research was designed, and conducted with the participation of students from three countries; Turkey, USA, and China.

#### **2.1. Purpose**

This study tries to find out how university students perceive various surveillance practices. In this framework, the research questions of the survey were given below:

1. Is electronic surveillance considered as a threat to privacy?
2. Is electronic surveillance considered as a tool for developing security of the citizens?

#### **2.2 Study Group**

In this cross-cultural study, we tried to cover different cultures so as to demonstrate the cultural similarities and differences in perception of surveillance. In the study, Turkey represents a transition point or a bridge between the Eastern and Western cultures. China stands for eastern culture and USA represents Western culture. The survey was conducted with the participation of undergraduate business administration students from Turkey (Hacettepe University/Department of Business Administration/Ankara), USA (University of Massachusetts/Isenberg School of Management/Department of Management/Amherst), and China (Huazhong Agricultural University/Department of Business Administration/Wuhan). Selected universities are state universities with a focus of teaching and scientific research. They are at a similar size in terms of student numbers (Hacettepe University/Ankara: 36,112 undergraduate and graduate students, Massachusetts University/Amherst: 28,084 undergraduate and graduate students and Huazhong Agricultural University/Wuhan: 23,000 undergraduate and graduate students). Of total 249 students in the survey, 102 are Turkish, 87 are American, and 58 are Chinese. A total of 130 instruments were completed by males (52 %) and 119 were completed by females (48%).

#### **2.3. Data Collection**

In the survey, students were asked questions about their perceptions on various IT practices of university administrators in the campuses; of employers in the private companies, and of the government officers in public sphere at students’ own country. Questionnaires were implemented during the first 15 minutes of class hours by the permission of course instructor. Students responded 16 questions. First part of the questionnaire (8 items) is about students’ perception about the threats to privacy arising from IT practices.

Second part of questionnaire (8 items) is about students’ perception of usefulness of IT practices for citizens’ security. Questions were asked on the fivefold Likert Scale (*1 means “strongly disagree,” and 5 means “strongly agree”*).

## 2.4. Reliability

Statistical analysis indicates that Cronbach Alpha coefficient is 0.68 for the questionnaire (16 questions).

## 2.5. Findings

Arithmetical means and One Way ANOVA test were used to explore answers to the research questions of the study.

### 2.5.1. IT as a Threat to Privacy

First research question of the study is about the threat potential of electronic surveillance to privacy. Therefore, arithmetic means were calculated for different variables in the scale.

Table 1 shows students' perceptions of threat for privacy regarding different surveillance applications.

**Table 1. Electronic Surveillance as a Threat to Privacy (Arithmetic Means for All Three Countries Involved in the Survey)\***

Item No	Item Content	Mean	Std. Deviation
1	Surveillance of emails and telephones in the workplace by employers	3.39	1.27
2	Surveillance by government over websites	3.36	1.15
3	Surveillance by university over campus members' Internet activities	3.26	1.16
4	Security cameras in the dormitories	3.06	1.52
5	Surveillance of citizen's emails and telephones by government officials	3.02	1.26
6	Security cameras in the campus	2.79	1.27
7	Security cameras in the workplace	2.75	1.25
8	Security cameras in the streets	2.71	1.33

\*Mean range is between "1" and "5".

"3.50" and higher values are assumed to show the existence of threat in students' perception. However, table shows that all values are below "3.50". This indicates that electronic surveillance applications are not perceived as a threat to privacy in neither of the countries. Results also show that use of "security cameras in campuses, workplaces, and streets" is perceived as a less important threat to privacy when compared to "surveillance of internet, e-mails and telephones" ranking higher in the table above.

Table 2 shows comparative results for three countries involved in the survey.

There are statistically significant differences in four variables for three countries ( $p < 0.05$ ):

1. "Surveillance of e-mails and telephones in the workplace by employers" is significant between USA-China and Turkey-China.
2. "Security cameras in the workplace" is significant between USA-China.
3. "Security cameras in the campus" is significant between USA-China and Turkey-China.
4. "Security cameras in the dormitories" is significant between USA-China and Turkey-China.

Table 2. Electronic Surveillance as a Threat to Privacy (Comparison of Three Countries)\*

USA	Mean	Std. Dev.	TURKEY	Mean	Std. Dev.	CHINA	Mean	Std. Dev.
Surveillance by government over websites	3.46	1.12	Surveillance of emails and telephones in the workplace by employers	3.37	1.32	Security cameras in the dormitories	4.31	1.40
Surveillance by university over campus members' Internet activities	3.33	1.02	Surveillance by government over websites	3.20	1.27	Surveillance of emails and telephones in the workplace by employers	3.86	1.19
Surveillance of citizen's emails and telephones by government officials	3.15	1.28	Surveillance by university over campus members' Internet activities	3.08	1.26	Surveillance by university over campus members' Internet activities	3.48	1.16
Surveillance of emails and telephones in the workplace by employers	3.12	1.18	Surveillance of citizen's emails and telephones by government officials	2.98	1.25	Surveillance by government over websites	3.47	0.94
<b>Security cameras in the streets</b>	<b>2.65</b>	<b>1.22</b>	<b>Security cameras in the workplace</b>	<b>2.80</b>	<b>1.47</b>	<b>Security cameras in the campus</b>	3.26	1.11
<b>Security cameras in the dormitories</b>	<b>2.56</b>	<b>1.26</b>	<b>Security cameras in the dormitories</b>	<b>2.78</b>	<b>1.40</b>	<b>Security cameras in the workplace</b>	3.14	1.08
<b>Security cameras in the campus</b>	<b>2.53</b>	<b>1.20</b>	<b>Security cameras in the campus</b>	<b>2.74</b>	<b>1.36</b>	<b>Security cameras in the streets</b>	2.98	1.22
<b>Security cameras in the workplace</b>	<b>2.44</b>	<b>1.00</b>	<b>Security cameras in the streets</b>	<b>2.60</b>	<b>1.47</b>	<b>Surveillance of citizen's emails and telephones by government officials</b>	2.91	1.26

\*Mean range is between "1" and "5".

Statistically significant differences at the four variables above show that Chinese students perceive cameras as a violation of their privacy more than American and Turkish students. There are no significant differences between perceptions of American and Turkish students in any of these four variables.

### 2.5.2. Electronic Surveillance as a Tool for Developing Security of the Citizens?

Second research question of the study is about security provision potential of electronic surveillance for citizens. Therefore, arithmetic means were calculated for different variables in the scale.

Table 3 shows students' perceptions of security provision potential of electronic surveillance applications.

**Table 3. Electronic Surveillance as a Tool for Developing Security of the Citizens (Arithmetic Means for All Three Countries Involved in the Survey)\***

	Mean	Std. Deviation
<b>Responsible usage develops civil rights and liberties</b>	<b>4.05</b>	0.85
<b>Usage of IT for campus security in my university is necessary for preventing crime</b>	<b>3.58</b>	0.98
<b>Lawful usage of surveillance is not a threat to security of citizens</b>	<b>3.53</b>	0.93
Governments should control Internet to prevent possible threats to security of citizens	3.49	1.12
Governmental control of Internet poses a threat to freedom of information	3.31	1.10
Government abuse of IT is low in my country	3.25	0.97
Governmental control of Internet poses a threat to freedom of thought	3.21	1.06
Usage of IT for campus security in my university is sufficient for preventing crime	2.90	1.03

*\*Mean range is between "1" and "5".*

3.50 and above values are assumed to show a positive perception on security provision potential of electronic surveillance applications. Results show that electronic surveillance by formal authorities is perceived as a security enhancing measure in case of the existence of legal regulations. Furthermore, students are also positive about "the control of internet by the governments" for citizens' security. Students from all three countries support IT security applications in their campuses.

Table 4 shows comparative results for three countries involved in the survey.

There are statistically significant differences in four variables for three countries ( $p < 0.05$ ).

1. "Responsible usage develops civil rights and liberties" is significant between USA-China and USA-Turkey.
2. "Governments should control Internet to prevent possible threats to security of citizens" is significant between USA-China and USA-Turkey.
3. "Lawful usage of surveillance is not a threat to security of citizens" is significant between USA-Turkey and China-Turkey.
4. "Governmental control of Internet poses a threat to freedom of information" is significant between USA-Turkey and China-Turkey.

Students from three countries seem to be hesitant about "government's abuse of IT" in their own country with mean scores changing "from 3.14 to 3.30". This result indicates that although there may be some malpractices, the level of disturbance related to IT abuse is not high in all three countries.

**Table 4. Electronic Surveillance as a Tool for Developing Security of the Citizens (Comparison of Three Countries)\***

USA	Mean	Std. Dev.	TURKEY	Mean	Std. Dev.	CHINA	Mean	Std. Dev.
<b>Responsible usage develops civil rights and liberties</b>	<b>3.73</b>	<b>0.72</b>	<b>Responsible usage develops civil rights and liberties</b>	<b>4.23</b>	<b>0.95</b>	<b>Responsible usage develops civil rights and liberties</b>	<b>4.24</b>	<b>0.71</b>
Usage of IT for campus security in my university is necessary for preventing crime	3.63	0.83	Lawful usage of surveillance is not a threat to security of citizens	3.91	0.87	Governments should control Internet to prevent possible threats to security of citizens	4.07	0.90
Governmental control of Internet poses a threat to freedom of information	3.60	1.07	Governments should control Internet to prevent possible threats to security of citizens	3.67	1.06	Usage of IT for campus security in my university is necessary for preventing crime	3.57	0.98
Governmental control of Internet poses a threat to freedom of thought	3.37	1.02	Usage of IT for campus security in my university is necessary for preventing crime	3.55	1.10	Governmental control of Internet poses a threat to freedom of information	3.44	0.86
Lawful usage of surveillance is not a threat to security of citizens	3.27	0.89	Government abuse of IT is low in my country	3.30	1.08	Lawful usage of surveillance is not a threat to security of citizens	3.28	0.87
Government abuse of IT is low in my country	3.26	0.86	Governmental control of Internet poses a threat to freedom of thought	3.05	1.19	Governmental control of Internet poses a threat to freedom of thought	3.24	0.82
Usage of IT for campus security in my university is sufficient for preventing crime	2.96	0.99	Governmental control of Internet poses a threat to freedom of information	2.97	1.17	Government abuse of IT is low in my country	3.14	0.93
Governments should control Internet to prevent possible threats to security of citizens	2.90	1.07	Usage of IT for campus security in my university is sufficient for preventing crime	2.78	1.08	Usage of IT for campus security in my university is sufficient for preventing crime	3.02	0.98

\*Mean range is between "1" and "5".

#### 4. Conclusion

With a cross-cultural survey covering three countries (Turkey, USA, and China), this study tries to find out how university students perceive various IT practices in their own country and finally it aims at developing a general framework that will help prevent unethical use of IT. Results indicate that IT applications in public service are not perceived as an important threat to civil rights and liberties by students. In addition, security cameras in campus, workplace, and streets are not perceived as a threat to civil rights and liberties, as well. Nevertheless, surveillance of internet, e-mails and telephones is not positively evaluated by students. Only surveillance of internet for the sake of citizens' security is partly approved.

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