

Alfred Tat-Kei Ho
University of Kansas
Wonhyuk Cho
Victoria University of Wellington, New Zealand

Government Communication Effectiveness and Satisfaction with Police Performance: A Large-Scale Survey Study

Alfred Tat-Kei Ho is associate professor in the School of Public Affairs and Administration at the University of Kansas. His research focuses on performance budgeting and management, citizen engagement, and the use of information technology by local governments.
E-mail: alfredho@ku.edu

Wonhyuk Cho is a senior lecturer in the School of Government at the Victoria University of Wellington, New Zealand. His research interests include citizen satisfaction, performance management, organizational behavior, and policing.
E-mail: wonhyukcho@gmail.com

Abstract: *For the last two decades, performance management theories and practices have focused on outcome-oriented management but have paid little attention to the role of public communication. Using multiple large data sets from Kansas City, Missouri, for 2009–14, this research suggests that the perceived effectiveness of public communication has a more substantial impact on public satisfaction with police protection and crime prevention than neighborhood crime rates and broken windows factors and that perceived effectiveness moderates the negative impact of crime rates. After controlling for residents’ demographic characteristics, the authors find that the perceived effectiveness of communication is associated with public satisfaction with the content and quality of the city website and the government television channel. The implications for public safety management and police–citizen relations as well as directions for future research on public communication strategies and public performance management are presented.*

Practitioner Points

- Better outcomes for city services do not necessarily lead to higher levels of citizen satisfaction with services.
- Effective government communication has a more consistent and substantial impact on residents’ perception of police effectiveness than changes in crimes rates or neighborhood conditions.
- Online engagement and government television channels are effective tools for enhancing the effectiveness of public communication.
- Performance management should pay more attention to the extended link from output and outcomes to communication effectiveness, public understanding, and satisfaction.

For the past few decades, the public administration community has emphasized the importance of results-oriented management (Pollitt and Bouckaert 2011), which is based on the implicit assumption that if service performance is improved, the public will become more satisfied with overall government performance. This seemingly logical relationship, however, is not necessarily the case (Kelly 2003; Stipak 1979; Van de Walle and Bouckaert 2007). Particularly in the area of public safety, many studies have found that a reduction in crime rates may not lead to better public satisfaction with police services (Brown and Coulter 1983; Reiss and Parks 2000; Stipak 1979). One explanation is that public cynicism toward government and negative images of police officers in the media may contribute to a lack of improvement in public satisfaction (Berman 1997; Lawrence 2000). Another possible explanation is that many residents are apathetic or ill-informed about the actual service improvement of the police, especially when they do not interact with them (Grimmelikhuijsen and Meijer 2015; Stipak 1979).¹

The gap between service outcomes and public perception is a challenge not only for the police but also for many public services (Stipak 1979). The gap suggests a need for more understanding of the role of communication in the performance–perception link (Berman 1997; Van de Walle and Bouckaert 2003). Amid mounting distrust of the public sector (Chanley, Rudolph, and Rahn 2000; Nye, Zelikow, and King 1997; Pew Research Center 2015), understanding how performance information moderates the relationship between service outcomes and public satisfaction and how government agencies can design and deploy public communication strategies more effectively can be especially helpful to public administrators.

We use crime trend and resident satisfaction survey data from Kansas City, Missouri, to examine how perceived communication effectiveness and public communication strategies are related to public satisfaction. We merged a multiyear citizen survey data set from Kansas City with police crime data, nuisance complaint data, and census housing and

population data. Because the merged data covered more than 240 neighborhoods, 600 census block groups,² and a time span of 12 quarters, we avoid the potential biases commonly found in one-time, cross-sectional studies with a single source of variables (Meier and O'Toole 2013). Given the rising police–public tension in many U.S. cities in recent years, we hope that the results of this study will be used to develop practical strategies to improve citizen satisfaction with police performance.

Assessing the Effect of Government Communication on Perceived Police Effectiveness

For many years, public communication has not been a major focus of public administration research and has not gained significant attention from professional managers (James 2011a; Lee 2009). Because of legal restrictions, political pressure, or fiscal constraints (Garnett 1997; Gelders, Bouckaert, and Van Ruler 2007), many governments prefer to invest their limited resources in service delivery rather than public communication (Liu, Horsley, and Levenshus 2010). Public management studies on communication tend to focus on internal organizational concerns (Garnett, Marlowe, and Pandey 2008; Pandey and Garnett 2006) or on the deployment of communication strategies in specific managerial contexts, such as disaster or emergency management (Comfort 2007; Garnett and Kouzmin 2007). Very few measure and evaluate empirically the policy impacts and value-added benefit of public communication strategies.

Nevertheless, the significant role of public communication and information should not be overlooked, as citizen access to information is fundamental to government accountability and the functioning of democracy (Delli Carpini and Keeter 1996; Grimmelikhuijsen and Meijer 2015; Grimmelikhuijsen et al. 2013; Lupia and McCubbins 1998; Milner 2002). In addition to its normative significance, public communication is an essential part of public management and service delivery. For example, effective communication about public programs contributes to the quality of life of local residents who need those services (Liu, Horsley, and Yang 2012). Framing of public information also shapes public expectations and perceptions of government performance (Charbonneau and Van Ryzin 2015; James 2011a, 2011b; James and John 2007).

Building on these past findings, we investigate how perceived public communication effectiveness influences satisfaction with police protection and crime prevention. Theoretically, satisfaction with police services should be related to the crime rate, a commonly used outcome measure of police performance (Ammons 2012). However, if citizens are ill-informed about what is happening in their community, their subjective perceptions of public safety may not necessarily be related to actual public safety outcomes. This informational problem is commonly found in public services in which citizens are not directly involved or official–citizen interaction happens infrequently (James 2011a). Because most citizens hear about crime problems only in the news and do not have direct experience with the police, except for traffic control activities (Epp, Maynard-Moody, and Haider-Markel 2014), their subjective feelings

If citizens are ill-informed about what is happening in their community, their subjective perceptions of public safety may not necessarily be related to actual public safety outcomes.

and personal beliefs are likely to frame their perceptions of police effectiveness (Skogan 2005, 2006).

A vast body of literature in sociology and criminal justice shows that many demographic factors, such as race, age, gender, and income, frame the subjective perception of personal safety (Cheurprakobkit 2000; Hurst and Frank 2000; Priest and Carter 1999; Sullivan, Dunham, and Alpert 1987). Studies have also found that neighborhood characteristics matter (Dunham and Alpert 1988; Kusow, Wilson, and Martin 1997; McGarrell, Giacomazzi, and Thurman 1997; Sampson and Bartusch 1998). Given the significant influence of these contextual socioeconomic factors, it is not surprising to find that actual public safety outcomes are often insignificant drivers of police effectiveness perceptions (Reisig and Parks 2000; Schafer, Huebner, and Bynum 2003).

The lack of a relationship between public safety outcomes and public perceptions poses a challenge for the police. While the public expects the police to solve crimes, by itself, reducing crime rates is insufficient to satisfy the public. At the same time, altering the social structure of a neighborhood is difficult and takes long-term community effort that is outside the immediate control of the police. Thus, police departments often seem to have their hands tied regarding what they can do to manage police–public relations.

In this article, we hypothesize that effective communication, not just improvement of actual policing outcomes, contributes to public satisfaction with police protection and crime prevention. In the private sector, companies routinely use proactive communication strategies to influence customer expectations and satisfaction (James 2011a). As applied to the public sector, a government that is more effective at informing the public should be more capable of earning greater public trust (Berman 1997). With respect to public safety concerns, if the government can provide accurate, clear, and sufficient information about where and when crime occurs and what is being done to prevent future crime, the public should be less worried about being at risk and less likely to overgeneralize what they see in the media (Dowler 2003). Effective communication, therefore, should contribute directly to satisfaction with police performance as well as indirectly by moderating the negative impact of crime rates (see figure 1).

Research Design and Data

We use Kansas City, Missouri, as a case study to test our hypothesis. Kansas City is a midsized U.S. city with a diverse population of about 450,000. According to the 2010 census, approximately 55 percent of the city's population is white, about 30 percent is African American, and about 10 percent is Hispanic or Latino. The median housing value is approximately \$134,600, and about 19 percent of the population is below the federal poverty level, which is about the same as the national urban poverty rate of 2011–12 (Nichols 2013).

Similar to many urban areas in the United States, crime is an important concern in Kansas City. According to the Uniform Crime Reports released by the Federal Bureau

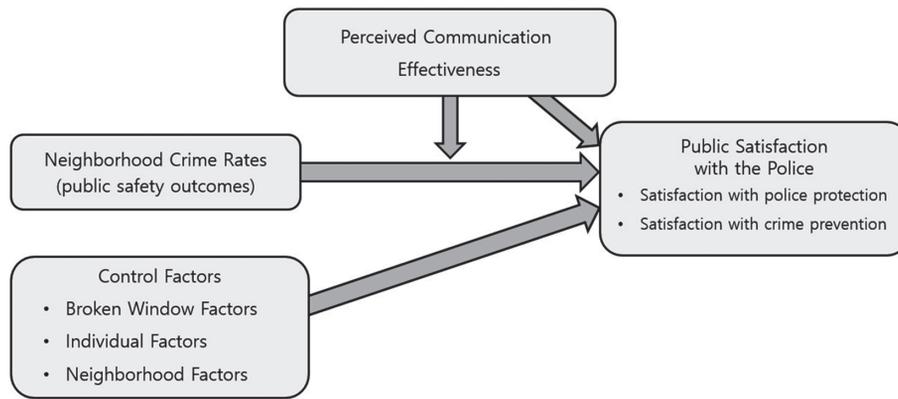


Figure 1 Theoretical Understanding of the Impact of Public Communication Effectiveness

of Investigation, Kansas City had the fifth-highest homicide rate among the 50 largest U.S. cities in 2012 and the fourth-highest overall crime rate among similar-sized cities in 2013. In 2011, the city council introduced new citywide curfew laws targeting teens under age 17 because of their unruly behavior and congregating in the downtown entertainment and shopping districts. In 2014, the city was further plagued by random highway shootings; the incidents were even featured on the national news (ABC News 2014).

Kansas City is trying hard to combat these problems. Even though the Kansas City Police Department is a separate entity overseen by the Kansas City Board of Police Commissioners, it works closely with the city and community organizations to launch many citywide campaigns against crime. For example, the city has an initiative known as the Kansas City No Violence Alliance that engages the public proactively to reduce the number of homicides. The city’s Communication Division also coordinates closely with the police department and provides police-related information through different city communication channels. The government cable television channel broadcasts public safety–related programs on Sundays, Tuesdays, Wednesdays, and Fridays for about 15 hours and 30 minutes weekly. The public television channel also airs the show *Weekly Report*, during which public safety and related community issues are often discussed.

In addition to the use of traditional communication channels, Kansas City relies on e-government tools to inform the public about public safety developments. The city’s online magazine, *KCMORE* (<http://kcmo.gov/kcmore/>), frequently features public safety issues. The local government website (<http://kcmo.gov>) provides an archive of the press releases of the police department and is linked directly to the Kansas City Police Department website (<http://kcmo.gov/police>). Residents can see daily updated crime mapping, search for crime statistics in different neighborhoods, and look for the names and contact information of the police officers in charge of their neighborhoods (police districts). In 2014, there were 3,441 searches for “police” or “KCPD” on the city website and 2,172 during the first eight months of 2015. In 2014, there were also 6,452 views of the city crime data set on the website. This was a dramatic increase from 303 views in 2013 and from fewer than 130 total views from 2009 to 2012.

Kansas City residents can also stay informed about police activities and crime problems through the social media channels of the Kansas City Police Department, which are provided on the city website. In 2015, the department’s YouTube channel had accumulated about six million views. Between 2014 and 2015, the number of Twitter followers (@kcpolice) increased from 52,700 to approximately 70,000, and there were more than 9,000 tweets by July 2015. In May 2015, the department’s Facebook page (<https://www.facebook.com/kcpolice>) had 31,281 followers compared with 26,136 followers in 2014.

Given the city’s crime issues and its efforts to inform and engage the public, Kansas City provides an interesting case to investigate how public satisfaction with police performance relates to crime rates and whether city communication makes a difference in public satisfaction. To address these issues, we merged city crime data from January 2009 through June 2014 with the census population data to calculate monthly crime incidents per 1,000 residents at the block group level. We also integrated the crime data with citizen satisfaction survey data collected in July 2011 ($n=1,200$), October 2011 ($n=1,140$), January 2012 ($n=1,249$), June 2012 ($n=1,111$), September 2012 ($n=1,036$), December 2012 ($n=1,015$), March 2013 ($n=1,048$), June 2013 ($n=1,001$), September 2013 ($n=1,049$), December 2013 ($n=1,027$), March 2014 ($n=1,173$), and June 2014 ($n=1,036$). To conduct these surveys, a professional survey company used stratified random sampling by city council districts.³ Because the citizen survey data that we obtained contained the addresses of the respondents, we were able to match the survey data with the crime data temporally and spatially.

Two questions in the citizen surveys are used as dependent variables in our analysis: “How satisfied are you with quality of local police protection?” and “How satisfied are you with the city’s overall efforts to prevent crime?” Responses to both questions were based on a Likert scale from 1 to 5, with 1 = “very dissatisfied,” 3 = “neutral” or “don’t know,” and 5 = “very satisfied.” The descriptive statistics for the dependent variables are presented in table 1. By combining all of the surveys conducted at different times, the descriptive statistics show that a majority (58 percent) of citizens were generally satisfied or highly satisfied with local police protection. They were slightly less satisfied with the city’s efforts to prevent crime, with only 40 percent reporting that they were satisfied or highly satisfied and close to 36 percent neutral or uncertain.

Table 1 Descriptive Statistics of Dependent Variables

Response	Local Police Protection		City's Efforts to Prevent Crime	
	Frequency	(%)	Frequency	(%)
Very satisfied (5)	1,923	(14.70)	1,093	(8.35)
Satisfied (4)	5,701	(43.57)	4,091	(31.26)
Neutral/don't know (3)	3,871	(29.58)	4,703	(35.94)
Dissatisfied (2)	1,101	(8.41)	2,273	(17.37)
Very dissatisfied (1)	489	(3.74)	925	(7.07)
Total	13,085	(100.00)	13,085	(100.00)

The independent variables in our models can be categorized into five groups of factors: communication effectiveness, crime, broken windows, individual, and neighborhood (see table 2). Our key independent variable, communication effectiveness, is measured by survey respondents' satisfaction with the "effectiveness of city communication with the public." This variable is based on a Likert scale of 1 to 5, with 1 = "very dissatisfied," 3 = "neutral" or "don't know," and 5 = "very satisfied." The interaction terms with crime factors measure the moderating effects of perceived communication effectiveness on police performance satisfaction.

We calculated the change in the crime rate from two years (13 to 24 months) to a year (1 to 12 months) prior to a citizen survey to measure the performance progress (or decline) of the police department. Because this variable incorporates prior performance, we indirectly control for factors that may influence expectations, which is an important dimension in the analysis of perceived performance (Charbonneau and Van Ryzin 2015; James 2009, 2011a; Van Ryzin 2004). Controlling for past performance, we expect that an increase (or decrease) in crime rates should affect public satisfaction with police performance negatively (or positively).

In addition, the models include the crime rates lagged two years (13 to 24 months before a survey). Our rationale is that crime is not something that everyone is likely to experience. Hence, the impact of crime may take time to affect citizens' perceptions through a variety of information channels. It is also possible that the negative impact lasts for more than a year. The lagged variable, therefore, is intended to capture any potential stickiness of the negative crime effects.

We also obtained the city's 311 nuisance complaint data from January 2011 to June 2014 and calculated the number of monthly nuisance problems for each of the 240 city-defined neighborhoods as control variables.⁴ Wilson and Kelling (1982) suggest that signs of disorder, such as broken windows, graffiti, unreturned shopping carts, and litter in the street, are likely to trigger petty crime behavior, such as stealing. While there are different interpretations of this theory and Wilson and Kelling's views are debated, a recent experimental study by Keizer, Lindenberg, and Steg (2008) provides credible evidence that disorder can indeed trigger criminal activity and other violations of social norms.

In this study, we are particularly interested in four types of nuisance complaints that are commonly associated with public safety concerns: graffiti, illegal dumping, street light issues, and

vacant property issues in neighborhoods (Hinkle 2013; LaGrange, Ferraro, and Supancic 1992; Lewis and Salem 1986; Ross and Mirowsky 1999; Wyant 2008). These "broken windows" factors serve as control variables, separate from actual crime problems. The incidence of these broken windows factors in each neighborhood, as reported one to three months before each of the quarterly resident surveys, was aggregated to measure the extent of the broken windows challenge. In the event that citizen complaints do not fully account for the real neighborhood disorder condition and reflect only neighborhood efficacy (Sampson and Raudenbush 2004), we also include a perception variable, which is the factor score based on the Likert-scale survey responses to questions about residents' satisfaction with illegal dumping control, cleanup of litter and debris on private property, enforcement of exterior maintenance regulations of residential property, and timeliness of the removal of abandoned cars from public properties. The Cronbach's alpha value of these four disorder perceptions is 0.74, which is acceptable.

Other neighborhood control factors include the percentages of African American residents, Hispanic residents, residents younger than 35, residents age 65 or older, single-parent households, and renter households, as well as the number of unemployed residents and the population size in the census block group in which survey respondents reside. Our model also controls for the individual demographic and socioeconomic characteristics of survey respondents, such as race, age, income status, gender, and home ownership status. With these variables and the neighborhood and broken windows variables discussed earlier, our models should capture most of the criminal activity concerns or police perception issues that are racially or demographically based but are not reflected in the official crime rates.⁵

To control for potential confirmation bias or single source bias, we include a factor score of three survey items in the models: satisfaction with the city as a place to live, work, and raise children (Cronbach's alpha = 0.815). To control for the possibility of common exposure, we also include year and council district fixed effects and use neighborhood clustering to control for the potential problem of variance underestimation at the neighborhood level.

Findings

Tables 3 and 4 present the model results. An increase in neighborhood crime rates is negatively related to police protection satisfaction, but this relationship is only statistically significant at the 10 percent level (models 1, 2, and 3). Crime rate change is not statistically significant in models 4, 5, and 6, which are related to crime prevention satisfaction. The lagged crime rates (criminal incidents per 1,000 population in a neighborhood 13 to 24 months ago) are not statistically significant in all models. These results are consistent with findings from the sociology, criminal justice, and public administration literatures showing that after controlling for neighborhood characteristics, the relationship between the crime rate and public satisfaction with police performance is weak.

Our key variable of interest, perceived communication effectiveness, is positive and highly significant, and its impact substantially outweighs the negative impact of crime rate increase and the sum of disorder complaints (table 5). Moreover, the interaction

term between perceived communication effectiveness and neighborhood crime rates is positive, as seen in table 3. This confirms that communication effectiveness can moderate the negative impact of crime and helps improve public satisfaction with police protection indirectly. These significant

Communication effectiveness can moderate the negative impact of crime and helps improve public satisfaction with police protection indirectly.

associations are found after we control for many individual and neighborhood characteristics of the respondents and the possibility of single-source bias.

Our findings also suggest support for the broken windows theory of public

Table 2 Descriptive Statistics of Independent Variables

Independent Variables	N	Mean	SD	Min.	Max.
Crime factors					
Crime rate percentage change	13,043	12.34	78.26	-100	1,500
Crimes per 1,000 residents lagged	13,085	58.41	123.78	0	1,822.22
Communication factors					
Communication effectiveness satisfaction	13,085	3.20	0.98	1	5
Broken windows factors in neighborhoods					
Graffiti complaints	13,085	0.33	0.97	0	15
Illegal dumping complaints	13,085	3.58	5.77	0	46
Streetlight complaints	13,085	2.28	3.72	0	20
Vacant property complaints	13,085	6.58	16.25	0	196
Sum of disorder complaints (sum of graffiti, illegal dumping, streetlight, and vacant property complaints)	13,085	12.77	21.58	0	217
Factor score: Dissatisfaction with nuisance disorder control	13,084	0.00	1.00	-2.69	2.30
Individual control factors of survey respondents					
African American (yes=1)	13,085	0.25	0.44	0	1
Hispanic (yes=1)	13,085	0.09	0.28	0	1
Younger than 35 (yes=1)	13,085	0.20	0.40	0	1
Age 65 or older (yes=1)	13,085	0.16	0.37	0	1
Household income less than \$30,000 (yes=1)	13,085	0.22	0.42	0	1
Household income \$100,000 or more (yes=1)	13,085	0.20	0.40	0	1
Female (male=0)	13,085	0.51	0.50	0	1
Renter (owner=0)	13,085	0.18	0.38	0	1
Crime victim (yes=1)	13,085	0.13	0.34	0	1
Factor score: General QOL satisfaction	13,085	0.00	1.00	-3.06	1.62
Census block group control factors					
Percentage of African American residents	13,085	27.22	31.89	0.1	96.5
Percentage of Hispanic residents	13,085	7.49	9.84	0.5	85.2
Percentage of residents younger than 35	13,085	41.68	9.03	13.5	83.6
Percentage of residents who are 65 or older	13,085	11.99	6.58	0.9	42.5
Percentage of single-parent households	13,085	10.15	7.27	0.5	52.6
Percentage of renter households	13,085	35.51	25.54	0.4	99.1
Number of unemployed residents	13,085	56.85	33.57	6	174
Size of block group population	13,085	1,275.22	693.90	288	3,995
Factors related to perceived communication effectiveness					
Perceived availability of city service information	9,006	3.29	0.96	1	5
Perceived quality of the government TV channel	9,006	3.24	0.74	1	5
Perceived quality of the city website	4,306	3.30	0.82	1	5
Recently attended a public meeting (yes=1)	8,385	0.32	0.47	0	1
Recently visited the city website (yes=1)	13,085	0.55	0.50	0	1
Recently contacted the city using 311 (yes=1)	13,085	0.53	0.50	0	1
Recently visited a community center (yes=1)	13,085	0.31	0.46	0	1

Note: The numbers of observations for questions about the availability of city service information, quality of city website, quality of government TV channel, and attended public meeting drop because not all quarterly surveys asked these questions.

Table 3 Ordered Logit Models for Satisfaction with Police Protection (N=13,043)

	Model 1		Model 2		Model 3	
Crime factors						
Crime rate percentage change	-1.11e-3 ⁺	(0.61e-3)	-1.12e-3 ⁺	(0.61e-3)	-1.13e-3 ⁺	(0.65e-3)
Crimes per 1,000 lagged	0.01e-3	(3.25e-4)	3.77e-6	(3.26e-4)	0.55e-4	(3.29e-4)
Communication factors						
Communication effectiveness satisfaction	0.594***	(0.026)	0.594***	(0.026)	0.493***	(0.025)
Crime increase rate x communication effectiveness	3.30e-4 ⁺	(1.76e-4)	3.32e-4 ⁺	(1.75e-4)	3.29e-4 ⁺	(1.83e-4)
Crime events lagged x communication effectiveness	7.83e-7	(1.04e-4)	8.00e-6	(1.04e-4)	-9.18e-6	(1.04e-4)
Broken windows factors						
Graffiti complaints	0.007	(0.021)				
Illegal dumping complaints	-0.006	(0.004)				
Streetlight complaints	-0.005	(0.005)				
Vacant property complaints	-0.002 [*]	(1.04e-3)				
Sum of disorder complaints			-2.37e-3***	(0.63e-3)	-2.06e-3**	(0.66e-3)
Factor score: Dissatisfaction with disorder control					-0.394***	(0.019)
Individual factors						
African American	-0.242***	(0.049)	-0.242***	(0.049)	-0.243***	(0.050)
Hispanic	-0.038	(0.065)	-0.038	(0.065)	-0.028	(0.066)
Age younger than 35	-0.070	(0.048)	-0.070	(0.048)	-0.087 ⁺	(0.049)
Age 65 or older	0.123 [*]	(0.053)	0.124 [*]	(0.053)	0.147**	(0.052)
Income less than \$30,000	0.090 ⁺	(0.047)	0.090 ⁺	(0.047)	0.039	(0.047)
Income \$100,000 or more	-0.030	(0.044)	-0.029	(0.044)	-0.004	(0.045)
Female	-0.129***	(0.033)	-0.128***	(0.033)	-0.123***	(0.034)
Renter	-1.45e-3	(0.046)	-1.80e-3	(0.046)	-0.031	(0.047)
Crime victim	-0.547***	(0.053)	-0.547***	(0.053)	-0.522***	(0.052)
Factor score: General QOL satisfaction	0.656***	(0.022)	0.656***	(0.022)	0.581***	(0.023)
Block group control factors						
African American residents, percentage	1.81e-4	(1.29e-3)	-0.55e-4	(1.30e-3)	6.11e-4	(1.27e-3)
Hispanic residents, percentage	-3.04e-3	(1.98e-3)	-3.13e-3	(1.95e-3)	-3.37e-3 ⁺	(1.87e-3)
Age younger than 35, percentage	2.49e-3	(4.29e-3)	2.82e-3	(4.30e-3)	1.82e-3	(4.20e-3)
Age 65 or older, percentage	0.011 [*]	(5.23e-3)	0.010 [*]	(5.20e-3)	0.010 ⁺	(5.24e-3)
Single-parent household, percentage	5.71e-3	(4.24e-3)	5.06e-3	(4.22e-3)	5.87e-3	(4.00e-3)
Renter household, percentage	-0.64e-3	(1.26e-3)	-0.63e-3	(1.27e-3)	-0.52e-3	(1.25e-3)
Number of unemployed residents	2.40e-4	(7.43e-4)	1.16e-4	(7.44e-4)	2.77e-4	(7.42e-4)
Size of block group population	0.76e-4 ⁺	(0.40e-4)	0.90e-4 [*]	(0.36e-4)	0.81e-4 [*]	(0.35e-4)
Likelihood ratio χ^2	3782.76 (df=36)***		3781.13 (df=33)***		4197.65 (df=34)***	
Akaike information criterion (AIC)	31138.48		31134.10		30715.75	
Max-rescaled Pseudo R ²	0.27		0.27		0.30	
-2 Log-likelihood	31058.48		31060.10		30639.75	

Notes: Figures in parentheses are standard errors. Statistical significance is indicated by the following: ⁺ $p < .1$; ^{*} $p < .05$; ^{**} $p < .01$; ^{***} $p < .001$. The fixed effects of survey years and council districts are not reported here.

safety perception. The number of vacant property complaints is negatively associated with satisfaction with police protection and crime prevention (models 1 and 4). The total number of disorder complaints in a neighborhood also negatively influences satisfaction with police protection (models 2 and 3) and crime prevention (models 5 and 6). After controlling for the number of nuisance complaints and other neighborhood characteristics, resident dissatisfaction with disorder control, a subjective perception measure, is also statistically significant and negatively related to the dependent variables.

Consistent with previous findings on racial tensions between minority residents and police (Brown and Coulter 1983; Epp, Maynard-Moody, and Haider-Markel 2014; Thomas and Hyman 1977; Walker 1997), our models suggest that African Americans in Kansas City are more likely to be dissatisfied with police protection. At the same time, Kansas City residents in census block groups with a higher share of African Americans are more satisfied with crime prevention (model 6), after controlling for other neighborhood and individual factors. This positive impact, however, is not sufficient to outweigh the negative impact felt by individual African American residents (the odds ratios in table 5).

Table 4 Ordered Logit Models for Satisfaction with Crime Prevention (N= 13,043)

	Model 4		Model 5		Model 6	
Crime factors						
Crime rate percentage change	0.95e-3	(7.17e-4)	0.95e-3	(7.17e-4)	-1.01e-3	(7.66e-3)
Crimes per 1,000 lagged	-0.12e-3	(3.78e-4)	-0.11e-3	(3.77e-4)	-0.13e03	(3.51e-4)
Communication factors						
Communication effectiveness satisfaction	0.649***	(0.025)	0.648***	(0.025)	0.520***	(0.025)
Crime increase rate x Communication effectiveness	2.22e-4	(2.12e-4)	2.23e-4	(2.11e-4)	2.23e-4	(2.28e-4)
Crime events lagged x Communication effectiveness	1.06e-4	(1.22e-4)	1.06e-4	(1.22e-4)	1.10e-4	(1.11e-4)
Broken windows factors						
Graffiti complaints	5.25e-3	(0.019)				
Illegal dumping complaints	-4.55e-3	(2.82e-3)				
Streetlight complaints	3.01e-3	(5.68e-3)				
Vacant property complaints	-0.002*	(1.02e-3)				
Sum of disorder complaints			-2.27e-3**	(7.21e-4)	-1.82e-3**	(6.76e-4)
Factor score: Dissatisfaction with disorder control					-0.513***	(0.022)
Individual factors						
African American	0.022	(0.050)	0.022	(0.050)	0.017	(0.050)
Hispanic	0.031	(0.054)	0.031	(0.054)	0.042	(0.055)
Age younger than 35	0.028	(0.042)	0.029	(0.041)	-0.008	(0.043)
Age 65 or older	0.024	(0.048)	0.024	(0.049)	0.054	(0.047)
Income less than \$30,000	0.108*	(0.046)	0.107*	(0.046)	0.040	(0.044)
Income \$100,000 or more	0.038	(0.049)	0.039	(0.049)	0.072	(0.049)
Female	-0.061*	(0.034)	-0.061*	(0.034)	-0.050	(0.036)
Renter	0.050	(0.046)	0.051	(0.046)	0.011	(0.046)
Crime victim	-0.486***	(0.047)	-0.486***	(0.047)	-0.449***	(0.046)
Factor score: General QOL satisfaction	0.657***	(0.022)	0.657***	(0.022)	0.569***	(0.022)
Block group control factors						
African American residents, percentage	1.76e-3	(1.23e-3)	1.67e-3	(1.24e-3)	2.70e-3*	(1.19e-3)
Hispanic residents, percentage	1.80e-3	(2.25e-3)	1.74e-3	(2.22e-3)	2.17e-3	(2.24e-3)
Age younger than 35, percentage	1.26e-3	(5.01e-3)	1.51e-3	(5.07e-3)	1.66e-4	(4.94e-3)
Age 65 or older, percentage	0.006	(5.27e-3)	0.006	(5.19e-3)	4.97e-3	(5.18e-3)
Single-parent household, percentage	5.54e-3	(3.86e-3)	5.07e-3	(3.79e-3)	5.96e-3	(3.66e-3)
Renter household, percentage	-1.89e-3	(1.33e-3)	-1.89e-3	(1.37e-3)	-1.84e-3	(1.34e-3)
Number of unemployed residents	1.37e-4	(7.73e-4)	0.36e-4	(7.73e-4)	1.46e-4	(7.68e-4)
Size of block group population	0.52e-4	(0.43e-4)	0.63e-4*	(0.36e-4)	0.51e-4	(0.35e-4)
Likelihood ratio χ^2	3894.84 (df = 36)***		3893.89 (df = 33)***		4616.25 (df = 34)***	
Akaike information criterion (AIC)	33499.94		33494.90		32769.57	
Max-rescaled Pseudo R ²	0.27		0.27		0.32	
-2 Log-likelihood	33419.94		33420.90		32693.57	

Notes: Figures in parentheses are standard errors. Statistical significance is indicated by the following: * $p < .1$; ** $p < .05$; *** $p < .01$; **** $p < .001$. The fixed effects of survey years and council districts are not reported here.

Compared with males, females are less likely to be satisfied with police performance. This is consistent with the literature on gender differences in public safety expectations and fear of crime (LaGrange and Ferraro 1989; Pain 2001; Sutton and Farrall 2005). Further, the victimization experience is a significantly negative factor, which is consistent with past findings (Dean 1980; Homant, Kennedy, and Fleming 1984; Tewksbury and West 2001). In contrast, older residents in Kansas City are more positive about police protection, perhaps because they have seen worse levels of criminal activity in the past and therefore feel

better, compared with other demographic groups, about the steady improvement in recent years.

To facilitate interpretation of the model results, we include table 6 to analyze the impacts of changes in neighborhood crime rate and perceived communication effectiveness, holding other factors at their means or medians. When perceived communication effectiveness drops from “neutral” to “dissatisfied” or from “neutral” to “highly dissatisfied,” the probabilities of rating police protection as dissatisfactory or highly dissatisfactory jump

Table 5 Odds Ratio Estimates of Statistically Significant Variables

Variable	Police Protection Satisfaction			Crime Prevention Satisfaction		
	Model 1	Model 2	Model 3	Model 4	Model 5	Model 6
Crime rate percentage change	0.999	0.999	0.999			
Communication effectiveness satisfaction	1.812	1.810	1.637	1.913	1.911	1.682
Vacant property complaints	0.998			0.998		
Sum of disorder complaints		0.998	0.998		0.998	0.998
Factor score: Dissatisfaction with disorder control			0.674			0.599
African American	0.785	0.785	0.785			
Age younger than 35			0.917			
Age 65 or older	1.131	1.132	1.158			
Income less than \$30,000	1.095	1.094		1.114	1.113	
Female	0.879	0.879	0.884	0.941	0.941	
Crime victim	0.579	0.579	0.594	0.615	0.615	0.638
Factor score: General QOL satisfaction	1.927	1.927	1.788	1.930	1.930	1.767
Percentage of African American residents						1.003
Percentage of Hispanic residents			0.997			
Percentage of age 65 or older	1.011	1.010	1.010			
Size of block group population	1.000	1.000	1.000		1.000	

Table 6 Simulated Impacts of Communication Effectiveness, Crime Rate, Disorder Complaints

	Dependent variable: Satisfaction with police protection					
	Evaluating at the Means or Medians	Communication Effectiveness = Dissatisfied	Communication Effectiveness = Highly Dissatisfied	Crime Increase = Mean + 1 * SD	Crime Increase = Mean + 2 * SD	
Highly dissatisfied	2.54%	5.10% (+2.56%)	8.91% (+6.37%)	2.90% (+0.36%)	2.92% (+0.39%)	
Dissatisfied	7.56%	13.73% (+6.16%)	20.77% (+13.20%)	8.51% (+0.95%)	8.58% (+1.01%)	
Neutral/Don't know	35.22%	44.29% (+9.07%)	46.01% (+10.79%)	37.30% (+2.08%)	37.44% (+2.22%)	
Satisfied	45.66%	32.30% (-13.36%)	21.74% (-23.92%)	43.33% (-2.33%)	43.16% (-2.50%)	
Highly satisfied	9.02%	4.58% (-4.44%)	2.57% (-6.45%)	7.96% (-1.06%)	7.89% (-1.12%)	

	Dependent variable: Satisfaction with crime prevention					
	Evaluating at the Means or Medians	Communication Effectiveness = Dissatisfied	Communication Effectiveness = Highly Dissatisfied			
Highly dissatisfied	5.44%	11.86% (+6.42%)	20.47% (+15.03%)	Crime factors are not statistically significant in the models for crime prevention satisfaction; accordingly, the impact is not calculated here.		
Dissatisfied	18.97%	31.17% (+12.21%)	38.63% (+19.66%)			
Neutral/Don't know	43.72%	40.30% (-3.42%)	31.44% (-12.28%)			
Satisfied	27.35%	14.68% (-12.67%)	8.42% (-18.93%)			
Highly satisfied	4.52%	1.98% (-2.54%)	1.05% (-3.47%)			

Notes: Figures in parentheses are changes from the first column of data. This analysis is based on the estimates of model 1 and model 4.

considerably, by 8.7 percentage points and 19.6 percentage points, respectively.

The negative impact of ineffective communication on crime prevention satisfaction is even more obvious. Holding other factors constant, a decline in perceived communication effectiveness from “neutral” to “dissatisfied,” which is a change of about one standard deviation, increases the probability of being “dissatisfied” or “highly dissatisfied” with crime prevention by 18.6 percentage points. The increase in the probability of being “dissatisfied” or “highly dissatisfied” with crime prevention is even greater (34.7 percentage points) when perceived communication effectiveness drops from “neutral” to “highly dissatisfied” (a change of about two standard deviations). In comparison, a change of one or two standard deviation in neighborhood crime rate has little impact on public

satisfaction with police protection and no statistically significant impact on satisfaction with crime prevention.

Because the impact of perceived communication effectiveness is significant and substantial, we conducted further analysis of factors related to this variable. After controlling for individual respondent characteristics, such as age, race, income, and public affairs participation, we find that satisfaction with the availability of information about city services, the perceived quality of the city website, and the perceived quality of the government television channel are all statistically significant and positively related to perceived communication effectiveness (table 7). Residents younger than 35 are also more satisfied, probably because they are more likely to use the city website and social media, and Kansas City has been using these engagement tools extensively to reach out to the

Table 7 Ordered Logit Model for Satisfaction with Overall Effectiveness of City Communication with the Public

Variable Description	Model 7			Model 8		
	Coef.	SE	Odds Ratio	Coef.	SE	Odds Ratio
Availability of city service info	0.783***	0.028	2.188	0.704***	0.042	2.022
Quality of the government TV channel	0.433***	0.033	1.542	0.475***	0.052	1.608
Quality of the city website				0.342***	0.045	1.408
African American	0.063	0.060		0.114	0.086	
Hispanic	-0.041	0.077		-0.196+	0.113	0.822
Age younger than 35	0.142*	0.056	1.152	-0.005	0.083	
Age 65 or older	-0.075	0.060		-0.108	0.090	
Income less than \$30,000	0.074	0.055		0.031	0.089	
Income \$100,000 or more	0.010	0.048		-0.020	0.067	
Female	0.114**	0.042	1.120	0.118*	0.059	1.126
Renter	0.076	0.061		0.113	0.089	
Factor score: General QOL satisfaction	0.613***	0.023	1.846	0.717***	0.036	2.047
Recently attended a public meeting				-0.099	0.072	
Recently visited the city website	-0.071	0.041		-0.079	0.067	
Recently contacted the city using 311	-0.068	0.045		-0.066	0.062	
Recently visited a community center	-0.068	0.047		-0.068	0.067	
Number of observations		9,006			4,306	
Likelihood ratio χ^2		3,306.35 (df=23)***			1,914.71 (df=23)***	
Akaike information criterion		21,633.89			9,820.13	
Max-rescaled Pseudo R^2		0.33			0.38	
-2 Log-likelihood		21,579.89			9,766.13	

Notes: Figures in parentheses are standard errors. Statistical significance is reported by the following: * $p < .1$; ** $p < .05$; *** $p < .01$; **** $p < .001$. The fixed effects of survey years and council districts are not reported here.

The numbers of observations in models 7 and 8 have fewer observations because the questions about the availability of information about city services, the quality of the city website, and the quality of the government television channel were added later; accordingly, not all quarterly surveys had these questions.

public. At the same time, Hispanics are generally less satisfied with communication effectiveness, probably reflecting language barriers and Hispanics' frustration with city communication efforts that are conducted mainly in English.⁶ This signals a potential concern about a digital divide along race and language lines and deserves closer attention by local officials.

Discussion

Using several large data sets from Kansas City, we confirm that perceived communication effectiveness contributes directly to public satisfaction with police protection and crime prevention. Effective communication also mitigates the negative impact of a crime rate increase. These findings have practical significance for local government administration, especially in the area of public safety management. More than three decades ago, Stipak (1979) pointed out a challenge faced by local governments: most citizens pay little attention to the operations and outcomes of public services as long as service quality is within some adequate range. With incomplete information, citizens formulate perceptions of public services based on ideologies, beliefs, and media influence and not necessarily the actual performance of services. Addressing this challenge can be especially difficult for the police because many of the demographic and social factors that cause crime, such as racial tensions, youth alienation, poverty, neighborhood

degradation, and foreclosure problems, are outside their control. Without sufficient information about when, where, and why crime happens and how the police respond to these problems, the public is likely to blame the police and perceive their effectiveness poorly, regardless of actual efforts and results.

Our findings suggest that local officials can manage this public perception problem by engaging and communicating with the public more effectively. Previously, Berman (1997) found that effective communication about government performance and public engagement are critical strategies that help reduce cynicism toward government. However, Berman surveyed only city managers and administrators and did not ask citizens how public communication results affect their satisfaction. His study, therefore, suggested that "careful case studies are needed of jurisdictions or agencies that have turned around negative public attitudes. Detailed attention is required to the strategies, contexts, and actors' abilities" (Berman 1997, 111).

Feeling more informed is likely to counterbalance the perceived risk of crime problems, and effective deployment of e-government strategies contributes positively to perceived communication effectiveness.

Our study fills this gap in the literature and reconfirms the significance of public communication after controlling extensively for many individual and social factors that frame citizens' views of government performance. We find that feeling more informed is likely to counterbalance the perceived risk of crime problems, and effective deployment of e-government strategies contributes positively

to perceived communication effectiveness. Because most local governments already have adopted e-government tools widely (Bonsón et al. 2012; Ho 2002), our findings suggest actionable solutions related to these tools. These findings are especially important to local police departments because the positive communication effects of using these tools can mitigate the negative perception impact of uncontrollable socioeconomic factors faced by a community.

Local policy makers and police leadership should also pay close attention to the significant association between broken windows problems and public perception of police effectiveness. While extending the broken windows theory to certain policing tactics, such as “zero-tolerance policing” or “disorder policing,” has been controversial and the effectiveness of these tactics has been questioned (Harcourt and Ludwig 2006; Sampson and Raudenbush 2004; Skogan 1990), public safety experts generally agree that more collaborative effort between the police, community organizations, and local developers to improve neighborhood conditions is helpful. These efforts are especially important in urban areas and disorganized communities (Choi and Choi 2012; Ryan and Pereira 2013; Weisburd and Eck 2004). If the police fail to recognize this connection and do not work effectively enough with other stakeholders to transform blighted neighborhoods into more livable communities, their public satisfaction ratings may suffer and may be lower than what they deserve despite their effort and accomplishments.

Our emphasis on public communication and community engagement does not imply that patrol and investigative activities to reduce crime are unimportant. After all, crime is a negative factor that affects public perception of police protection (models 1, 2, and 3). However, reducing the crime rate by itself is insufficient to build greater public trust in the police. Public safety effectiveness, as perceived by the public, is embedded in a larger context of community well-being and public engagement. Focusing only on traditional patrol and response activities will fail to have an impact on crime, public perception of personal safety, or the perceived effectiveness of the police (Kelling et al. 1974).

Conclusion

For the past two decades, much of the focus of public management research has been on the appropriate measurement of performance, the logical linkages between activities, output, and outcomes, and the organizational strategies of results-oriented management (Behn 2003; Hatry 2006; Ho and Ni 2005; Poister, Aristigueta, and Hall 2014). Some scholars also have highlighted the important and complex connection between service outcomes and public trust (Van de Walle and Bouckaert 2003; Yang and Holzer 2006). However, little has been done to analyze the role of public communication from a citizen perspective or to consider how public communication effectiveness may mitigate the outcome–satisfaction connection.

Using multiple large data sets from Kansas City, Missouri, we find that more effective communication, as perceived by the public, not only improves public satisfaction with police protection and crime prevention directly but also mitigates the negative impact

of a crime rate increase. These findings reconfirm the positive role of public communication and information in influencing citizen satisfaction (Berman 1997; Charbonneau and Van Ryzin 2015; James 2011a, 2011b; James and John 2007) and suggest a need for public administration researchers and practitioners to pay more attention to this understudied field (Garnett 1992). These lessons are particularly important for results-oriented management in public safety management. Although the emphasis on the logical linkage between activities, output, and outcome remains important, we believe that the extended link from outcomes to public understanding, satisfaction, and trust should receive more attention, especially when public cynicism toward government continues to increase.

Our research using Kansas City as a case study is only an initial step toward better understanding of the policy impacts of public communication strategies. Future research should continue to explore related issues. For example, our study demonstrates that the quality and content of the city website is associated positively with perceived communication effectiveness. We do not, however, have data to test how performance information should be presented on a city website to enhance public satisfaction or how information strategies should be designed and deployed to maximize positive communication effects. Recent studies using experiments to explore these questions have yielded some interesting results (Charbonneau and Van Ryzin 2015; James 2011a, 2011b; James and John 2007). Future work should continue to examine how e-government and traditional media strategies can be designed and implemented, especially in a variety of policy and community contexts.

Public safety effectiveness,
as perceived by the public, is
embedded in a larger context
of community well-being and
public engagement.

Acknowledgments

This project was funded primarily by the city government of Kansas City, Missouri, with matching funds from the Kansas Center for Research, College of Liberal Arts and Sciences, and School of Public Affairs and Administration at the University of Kansas. The project also benefited from the

encouragement and support of the William T. Kemper Foundation of Kansas City, Missouri, and received tremendous data and logistical assistance from the Office of Performance Management and the City Manager’s Office of Kansas City, Missouri. In addition to the project funding from Kansas City, Missouri, Wonhyuk Cho received partial financial support from Seoul National University through a grant (NRF-2014S1A3A2044898) to work on this project. All errors remain the responsibilities of the authors. Any questions about the project should be directed to Alfred Ho at alfredho@ku.edu.

Notes

1. It is also possible that citizens’ subjective evaluations of public program performance are based on factors that are different from the measurement focus of internal performance management of police departments or other public safety programs (Parks 1984; Van de Walle and Bouckaert 2007).
2. A census block group is a cluster of census blocks defined by the U.S. Census Bureau based on population and statistical divisions of census tracts. Each census block group has a unique geographic code and does not cross census tract, county, or state boundaries.

3. These quarterly surveys do not track individual respondents; hence, they are not panel data.
4. Kansas City, Missouri, has a comprehensive service request system called 311. Residents contact the 311 Service Center by dialing 311. They also can file service requests by fax, mail, e-mail, office visit, Twitter, or mobile phone app (iOS and Android). These requests are then routed to the relevant departments by the 311 case management system.
5. Critics of official crime statistics reported by the police may argue that these crime statistics are often racially or socially biased and do not depict the true picture of criminal activity in a neighborhood or that they may overrepresent the extent of criminal activity in minority neighborhoods (Covington and Taylor 1991; Parks 1984; Sampson and Raudenbush 2004). However, because we control for many individual and neighborhood characteristics in our models, any measurement errors between the true crime picture and the official crime statistics should be captured and compensated for in our models.
6. This interpretation of the language barrier of Hispanics was suggested by city officials in Kansas City, Missouri, who work in neighborhoods with high percentages of Hispanic population. Based on our model results, recent efforts to reach out to Hispanic residents using Spanish have been made by the 311 complaint center and by the city's communication team.

References

- ABC News. 2014. Highway Shooting Cases Rise to 20, Kansas City Police Say. April 10. <http://abcnews.go.com/US/highway-shooting-cases-rise-20-kansas-city-police/story?id=23279434> [accessed April 13, 2016].
- Ammons, David N. 2012. *Municipal Benchmarks: Assessing Local Performance and Establishing Community Standards*, 3rd ed. Armonk, NY: M. E. Sharpe.
- Behn, Robert D. 2003. Why Measure Performance? Different Purposes Require Different Measures. *Public Administration Review* 63(5): 586–606.
- Berman, Evan M. 1997. Dealing with Cynical Citizens. *Public Administration Review* 57(5): 105–12.
- Bonsón, Enrique, Lourdes Torres, Sonia Royo, and Francisco Flores. 2012. Local E-Government 2.0: Social Media and Corporate Transparency in Municipalities. *Government Information Quarterly* 29(2): 123–32.
- Brown, Karin, and Philip B. Coulter. 1983. Subjective and Objective Measures of Police Service Delivery. *Public Administration Review* 43(1): 50–58.
- Chanley, Virginia A., Thomas J. Rudolph, and Wendy M. Rahn. 2000. The Origins and Consequences of Public Trust in Government: A Time Series Analysis. *Public Opinion Quarterly* 64(3): 239–56.
- Charbonneau, Étienne, and Gregg G. Van Ryzin. 2015. Benchmarks and Citizen Judgments of Local Government Performance: Findings from a Survey Experiment. *Public Management Review* 17(2): 288–304.
- Churprakobkit, Sutham. 2000. Police-Citizen Contact and Police Performance Attitudinal Differences between Hispanics and Non-Hispanics. *Journal of Criminal Justice* 28(4): 325–36.
- Choi, Cheon Geun, and Sang Ok Choi. 2012. Collaborative Partnerships and Crime in Disorganized Communities. *Public Administration Review* 72(2): 228–38.
- Comfort, Louise K. 2007. Crisis Management in Hindsight: Cognition, Communication, Coordination, and Control. *Special issue, Public Administration Review* 67: 189–97.
- Covington, Jeanette, and Ralph B. Taylor. 1991. Fear of Crime in Urban Residential Neighborhoods. *Sociological Quarterly* 32(2): 231–49.
- Dean, Deby. 1980. Citizen Ratings of the Police: The Difference Contact Makes. *Law & Policy* 2(4): 445–71.
- Delli Carpini, Michael X. and Scott Keeter. 1996. *What Americans Know about Politics and Why It Matters*. New Haven, CT: Yale University Press.
- Dowler, Kenneth. 2003. Media Consumption and Public Attitudes toward Crime and Justice: The Relationship between Fear of Crime, Punitive Attitudes, and Perceived Police Effectiveness. *Journal of Criminal Justice and Popular Culture* 10(2): 109–26.
- Dunham, Roger G., and Geoffrey P. Alpert. 1988. Neighborhood Differences in Attitudes toward Policing: Evidence for a Mixed-Strategy Model of Policing in a Multi-Ethnic Setting. *Journal of Criminal Law and Criminology* 79(2): 504–23.
- Epp, Charles R., Steven Maynard-Moody, and Donald P. Haider-Markel. 2014. *Pulled Over: How Police Stops Define Race and Citizenship*. Chicago: University of Chicago Press.
- Garnett, James L. 1992. *Communicating for Results in Government: A Strategic Approach for Public Managers*. San Francisco: Jossey-Bass.
- Garnett, James L. 1997. Administrative Communication: Domains, Threats, and Legitimacy. In *Handbook of Administrative Communication*, edited by James L. Garnett, and Alexander Kouzmin, 3–20. New York: Marcel Dekker.
- Garnett, James L., and Alexander Kouzmin. 2007. Communicating throughout Katrina: Competing and Complementary Conceptual Lenses on Crisis Communication. *Special issue, Public Administration Review* 67: 171–88.
- Garnett, James L., Justin Marlowe, and Sanjay K. Pandey. 2008. Penetrating the Performance Predicament: Communication as a Mediator or Moderator of Organizational Culture's Impact on Public Organizational Performance. *Public Administration Review* 68(2): 266–81.
- Gelders, Dave, Geert Bouckaert, and Betteke Van Ruler. 2007. Communication Management in the Public Sector: Consequences for Public Communication about Policy Intentions. *Government Information Quarterly* 24(2): 326–37.
- Grimmelikhuijsen, Stephan G., and Albert J. Meijer. 2015. Does Twitter Increase Perceived Police Legitimacy? *Public Administration Review* 75(4): 598–607.
- Grimmelikhuijsen, Stephan G., Gregory Porumbescu, Boram Hong, and Tobin Im. 2013. The Effect of Transparency on Trust in Government: A Cross-National Comparative Experiment. *Public Administration Review* 73(4): 575–86.
- Harcourt, Bernard E., and Jens Ludwig. 2006. Broken Windows: New Evidence from New York City and a Five-City Social Experiment. *University of Chicago Law Review* 73: 271–320.
- Hatry, Harry P. 2006. *Performance Measurement: Getting Results*. Washington, DC: Urban Institute.
- Hinkle, Joshua C. 2013. The Relationship between Disorder, Perceived Risk, and Collective Efficacy: A Look into the Indirect Pathways of the Broken Windows Thesis. *Criminal Justice Studies* 26(4): 408–32.
- Ho, Alfred Tat-Kei. 2002. Reinventing Local Governments and the E-Government Initiative. *Public Administration Review* 62(4): 434–44.
- Ho, Alfred Tat-Kei, and Anna Ya Ni. 2005. Have Cities Shifted to Outcome-Oriented Performance Reporting? A Content Analysis of City Budgets. *Public Budgeting and Finance* 25(2): 61–83.
- Homant, Robert J., Daniel B. Kennedy, and Roger M. Fleming. 1984. The Effect of Victimization and the Police Response on Citizen's Attitudes toward Police. *Journal of Police Science and Administration* 12(3): 323–32.
- Hurst, Yolander G., and James Frank. 2000. How Kids View Cops: The Nature of Juvenile Attitudes toward the Police. *Journal of Criminal Justice* 28(3): 189–202.
- James, Oliver. 2009. Evaluating the Expectations Disconfirmation and Expectations Anchoring Approaches to Citizen Satisfaction with Local Public Services. *Journal of Public Administration Research and Theory* 19(1): 107–23.
- James, Oliver. 2011a. Managing Citizens' Expectations of Public Service Performance: Evidence from Observation and Experimentation in Local Government. *Public Administration* 89(4): 1419–35.
- James, Oliver. 2011b. Performance Measures and Democracy: Information Effects on Citizens in Field and Laboratory Experiments. *Journal of Public Administration Research and Theory* 21(3): 399–418.
- James, Oliver, and Peter John. 2007. Public Management at the Ballot Box: Performance Information and Electoral Support for Incumbent English Local Governments. *Journal of Public Administration Research and Theory* 17(4): 567–80.

- Keizer, Kees, Siegwart Lindenberg, and Linda Steg. 2008. The Spreading of Disorder. *Science* 322(5908): 1681–85.
- Kelling, George, Tony Plate, Duane Dieckman, and Charles Brown. 1974. *The Kansas City Preventive Experiment: Technical Report*. Washington, DC: Police Foundation.
- Kelly, Janet M. 2003. Citizen Satisfaction and Administrative Performance Measures: Is There Really a Link? *Urban Affairs Review* 38(6): 855–66.
- Kusow, Abdi M., Leon C. Wilson, and David E. Martin. 1997. Determinants of Citizen Satisfaction with the Police: The Effects of Residential Location. *Policing: An International Journal of Police Strategies and Management* 20(4): 655–64.
- LaGrange, Randy L., and Kenneth F. Ferraro. 1989. Assessing Age and Gender Differences in Perceived Risk and Fear of Crime. *Criminology* 27(4): 697–720.
- LaGrange, Randy L., Kenneth F. Ferraro, and Michael Supancic. 1992. Perceived Risk and Fear of Crime: Role of Social and Physical Incivilities. *Journal of Research in Crime and Delinquency* 29(3): 311–34.
- Lawrence, Regina G. 2000. *The Politics of Force: Media and the Construction of Police Brutality*. Berkeley: University of California Press.
- Lee, Mordecai. 2009. The Return of Public Relations to the Public Administration Curriculum? *Journal of Public Affairs Education* 15(4): 515–33.
- Lewis, Dan A., and Greta Salem. 1986. *Fear of Crime: Incivility and the Production of a Social Problem*. New Brunswick, NJ: Transaction Books.
- Liu, Brooke F., J. Suzanne Horsley, and Abbey B. Levenshus. 2010. Government and Corporate Communication Practices: Do the Differences Matter? *Journal of Applied Communication Research* 38(2): 189–213.
- Liu, Brooke F., J. Suzanne Horsley, and Kaifeng Yang. 2012. Overcoming Negative Media Coverage: Does Government Communication Matter? *Journal of Public Administration Research and Theory* 22(3): 597–621.
- Lupia, Arthur, and Mathew D. McCubbins. 1998. *The Democratic Dilemma: Can Citizens Learn What They Need to Know?* New York: Cambridge University Press.
- McGarrell, Edmund F., Andrew L. Giacomazzi, and Quint C. Thurman. 1997. Neighborhood Disorder, Integration, and the Fear of Crime. *Justice Quarterly* 14(3): 479–500.
- Meier, Kenneth J., and Laurence J. O'Toole, Jr. 2013. Subjective Organizational Performance and Measurement Error: Common Source Bias and Spurious Relationships. *Journal of Public Administration Research and Theory* 23(2): 429–56.
- Milner, Henry. 2002. *Civic Literacy: How Informed Citizens Make Democracy Work*. Hanover, NH: University Press of New England.
- Nichols, Austin. 2013. *Poverty in the United States*. Washington, DC: Urban Institute.
- Nye, Joseph S., Jr., Philip D. Zelikow, and David C. King, eds. 1997. *Why People Don't Trust Government*. Cambridge, MA: Harvard University Press.
- Pain, Rachel. 2001. Gender, Race, Age and Fear in the City. *Urban Studies* 38(5–6): 899–913.
- Pandey, Sanjay K., and James L. Garnett. 2006. Exploring Public Sector Communication Performance: Testing a Model and Drawing Implications. *Public Administration Review* 66(1): 37–51.
- Parks, Roger B. 1984. Linking Objective and Subjective Measures of Performance. *Public Administration Review* 44(2): 118–27.
- Pew Research Center. 2015. Beyond Distrust: How Americans View Their Government. <http://www.people-press.org/2015/11/23/beyond-distrust-how-americans-view-their-government/> [accessed April 1, 2016].
- Poister, Theodore H., Maria P. Aristigueta, and Jeremy L. Hall. 2014. *Managing and Measuring Performance in Public and Nonprofit Organizations: An Integrated Approach*, 2nd ed. San Francisco: Jossey-Bass.
- Pollitt, Christopher, and Geert Bouckaert. 2011. *Public Management Reform: A Comparative Analysis—New Public Management, Governance, and the Neo-Weberian State*, 3rd ed. New York: Oxford University Press.
- Priest, Thomas B., and Deborah B. Carter. 1999. Evaluations of Police Performance in an African American Sample. *Journal of Criminal Justice* 27(5): 457–65.
- Reisig, Michael D., and Roger B. Parks. 2000. Experience, Quality of Life, and Neighborhood Context: A Hierarchical Analysis of Satisfaction with Police. *Justice Quarterly* 17(3): 607–30.
- Ross, Catherine E., and John Mirowsky. 1999. Disorder and Decay the Concept and Measurement of Perceived Neighborhood Disorder. *Urban Affairs Review* 34(3): 412–32.
- Ryan, Julia, and Andrea Pereira. 2013. It Takes a Village: Communities Tackle Crime. *Communities & Banking* (Summer): 26–28. <https://www.bostonfed.org/commdev/c&b/2013/summer/it-takes-a-village-communities-tackle-crime.htm> [accessed April 13, 2016].
- Sampson, Robert J., and Dawn Jeglum Bartusch. 1998. Legal Cynicism and (Subcultural?) Tolerance of Deviance: The Neighborhood Context of Racial Differences. *Law & Society Review* 32(4): 777–804.
- Sampson, Robert J., and Stephen W. Raudenbush. 2004. Seeing Disorder: Neighborhood Stigma and the Social Construction of Broken Windows. *Social Psychology Quarterly* 67(4): 319–42.
- Schafer, Joseph A., Beth M. Huebner, and Timothy S. Bynum. 2003. Citizen Perceptions of Police Services: Race, Neighborhood Context, and Community Policing. *Police Quarterly* 6(4): 440–68.
- Skogan, Wesley G. 1990. *Disorder and Decline*. New York: Free Press.
- Skogan, Wesley G. 2005. Citizen Satisfaction with Police Encounters. *Police Quarterly* 8(3): 298–321.
- Skogan, Wesley G. 2006. Asymmetry in the Impact of Encounters with Police. *Policing and Society* 16(2): 99–126.
- Stipak, Brian. 1979. Citizen Satisfaction with Urban Services: Potential Misuse as a Performance Indicator. *Public Administration Review* 39(1): 46–52.
- Sullivan, Peggy S., Roger G. Dunham, and Geoffrey P. Alpert. 1987. Attitude Structures of Different Ethnic and Age Groups Concerning Police. *Journal of Criminal Law and Criminology* 78(1): 177–96.
- Sutton, Robbie M., and Stephen Farrall. 2005. Gender, Socially Desirable Responding and the Fear of Crime Are Women Really More Anxious about Crime? *British Journal of Criminology* 45(2): 212–24.
- Tewksbury, Richard, and Angela West. 2001. Crime Victims' Satisfaction with Police Services: An Assessment in One Urban Community. *Criminal Justice Studies* 14(4): 271–85.
- Thomas, Charles W., and Jeffrey M. Hyman. 1977. Perceptions of Crime, Fear of Victimization, and Public Perceptions of Police Performance. *Journal of Police Science and Administration* 5(3): 305–17.
- Van de Walle, Steven, and Geert Bouckaert. 2003. Public Service Performance and Trust in Government: The Problem of Causality. *International Journal of Public Administration* 26(8–9): 891–913.
- Van de Walle, Steven, and Geert Bouckaert. 2007. Perceptions of Productivity and Performance in Europe and the United States. *International Journal of Public Administration* 30(11): 1123–40.
- Van, Ryzin, and G. Gregg. 2004. Expectations, Performance, and Citizen Satisfaction with Urban Services. *Journal of Policy Analysis and Management* 23(3): 433–48.
- Walker, Samuel. 1997. Complaints against the Police: A Focus Group Study of Citizen Perceptions, Goals, and Expectations. *Criminal Justice Review* 22(2): 207–26.
- Weisburd, David, and John E. Eck. 2004. What Can Police Do to Reduce Crime, Disorder, and Fear? *Annals of the American Academy of Political Science* 593: 42–65.
- Wilson, James Q., and George L. Kelling. 1982. Broken Windows. *Atlantic Monthly* 249(3): 29–38.
- Wyant, Brian R. 2008. Multilevel Impacts of Perceived Incivilities and Perceptions of Crime Risk on Fear of Crime: Isolating Endogenous Impacts. *Journal of Research in Crime and Delinquency* 45(1): 39–64.
- Yang, Kaifeng, and Marc Holzer. 2006. The Performance–Trust Link: Implications for Performance Measurement. *Public Administration Review* 66(1): 114–26.