An Exploratory Content Analysis of Law Enforcement Websites: An Eight Nation Study

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Abstract

Law enforcement web presence has continued to grow since the mid 90's. A web page is increasingly the face of many organizations and businesses and is often the first point of contact. There is a tangible battle that exists regarding where citizens get information. Given the enhanced usage of some information websites (e.g. Wikipedia) over a law enforcement agency's webpage, are there "information gaps" that exist that, if addressed, may enhance a user's experience on that specific law enforcement web site. The following research is an eight nation analysis of the content found on those websites. Using data collected via a modified web page assessment tool (WICS), results indicate that there are significant deficiencies in some key areas such as availability of crime data, mission statements, crime warnings and general leadership/agency contact information.

Literature Review

Beginning around the mid-1990's, many law enforcement agencies established web pages as a way of having a presence upon, what was then, a new technology. Many of these pages consisted of a single page, no hyperlinks, no pictures and mostly text explaining that page was the "official" page of the agency. Without question, the capability of sophistication has grown exponentially since the mid-1990's. However, little is known as to whether or not law enforcement agencies have embraced some of these new capabilities (Tahiliani, 2012).

What is empirical is the impact of website sophistication on commerce. From the mid-1990's on, business done via the internet has grown remarkably. Over the last several years, e-commerce has outpaced growth wise, in-store retail sales. According to the American Consumer Satisfaction Index, e-commerce sites provide greater levels of satisfaction than do brick and mortar storefronts. There are several explanations given for this robust growth such as technology familiarity, constricted schedules of consumers, sense of security in transactions online growing, and a generally user friendly nature to e-commerce transactions (Park & Gretzel, 2007).

So what does all of this mean for law enforcement agencies? Tahiliani (2012) found that there were less access points or "hits" on the New York City Police Department's web page than the Wikipedia entry for the New York City Police Department. One could postulate that the public is accessing sites such as Wikipedia over an agency's home page for agency information.

Moreover, webpages have a capacity to not only inform, but also persuade. The consumer voluntarily is going to the site to access a "product" and is open in many ways to be influenced by the content on the site (Nielson, 2009) This phenomenon has been studied extensively in the areas of political campaign research (Gibson & Ward, 2000)(Wang, 2009). Lines of communication are opened between the service provider and the served. There are opportunities that arise for one to promote one's talents and skills (Kyriacou, Pancholi, & Baskaran, 2010).

As the literature indicates, web presence alone is not adequate enough for a product provider, public or private, to reap the benefits of accurate product description, product promotion, and reliable/repeat consumer-provider communication. The quality of the interaction between consumer and website is acute (Liu & Arnett, 2000)(Miranda, Chamorro, Valero & Maestre, 2010)(Rizavi, Ali & Rizavi, 2011) (Voorveld, Neijens & Smit, 2011).Park and Young (2007) in their meta-analysis identified content associated with robust website usage, repeat business via online and overall satisfaction with transaction.

(1) Information quality—variety, scope, conciseness and accuracy.
(2) Ease of use—usability, accessibility, navigability, logical structure

(3) Responsiveness—contact information, help instructions

(4) security/privacy—efforts made in protecting information and proper storage of information

(5) Visual appearance—ability to attract attention, convey message, aesthetics

(6) Trust—Brand recognition, intentions and credibility

(7) Interactivity—interactive features such as tours, chats, FAQs

(8) Personalization—customization of offerings and of information

(9) Fulfillment—order process, accuracy of service promises, on-time delivery

Studies of law enforcement web pages, to date, have only assessed specific content. Dameron et al (2009) studied university campus police websites and assessed theaccessibility of *Cleary Act* information. DeLone (2007) studied the content and accessibility of police department mission statements after 9-11. However, at present, there is no literature available to assess law enforcement web sites. Consequentially, there are no instruments to guide one in undertaking such a project.

The purpose of the present study is to explore and make an accounting of the content of law enforcement web sites. To this end, the researcher proposes utilizing instruments from an industry resplendent in web site assessment—hotel/restaurant management. As the above review of the literature indicates, there is a great dearth of information that confirms the effectiveness of measuring for some of the above criteria.

Methods

Website Information Content Survey

Content analysis is the most common means of assessment of much of the above criteria (Gibson & Ward, 2000)(Hasley & Gregg, 2010)(Pfeil & Zaphiris, 2010).Criteria for the present study were adapted from the Website Information Content Survey (WICS) developed by Joseph Hasley and Dawn Gregg in 2010 for the purposes of exploring e-commerce domains. Their study builds off of previous research in the general and e-commerce fields which state that "information cues" found on websites or in other media, greatly enhance the likelihood of repeat business (Resnik and Stern, 1977). These information cues are information points that allow for a consumer to judge and utilize a product (DeLone and McLean, 1992)(Zhang and von Dran, 2001). WICS was intended to provide practitioners and researchers with a means of systematically describing information content present on websites across several areas of e-commerce including electronics, medical services, specialty foods, insurance and cruise lines. The survey examined ninety information cues across six general themes. The themes covered in WICS assessed the presence of navigation information, product information, personalized information/consumer preferences, advertising, customer service information and transaction information. Researchers nominally marked "yes" or "no" to the presence of each cue.

Adaptations to the WICS

The researcher explicitly kept some of the cues as set forth in the WICS. Some cues and themes were deleted because they lacked any face validity in relation to law enforcement. Finally, some cues needed to be adapted to fit more law enforcement related criteria. These adaptations are more semantic related and still maintain the spirit of the themes they fall under. Appendix A contains the law enforcement adapted version of WICS.

The following chart illustrates a list of themes used and their adaptations.

Theme	Adaptation to law enforcement criteria
Navigation information	None, navigation bar and search engine kept
Customer service	Data related to agency leaders, precinct maps and recruitment information constituted this theme
Product description	Agency mission, crime data, illustration of police functions such as crime control, community relationships, public safety and special operations constituted this theme
Claims of superiority/advertising	Advertising per se was not assessed but illustrations of credentials, awards, commendations were measured

To explain further the following represents further how police "function" was conceptualized:

- Crime control—post hoc response to criminal activity in general, a clear expression of legal control (Jiang, Lambert & Jenkings, 2010)
- Community relations/outreach—"working with" or "cooperating" with the community to address crime, enhance public safety and/or build relationships (Radalet & Carter, 1994)
- Public safety—police responses involving crime prevention and/or non-criminal safety issues (Catalano et al, 1999)
- Special operations—department contains specialized units such as SWAT, domestic violence units, marine operations, etc.

It should be noted that police function cues (in WICS seen as "product information") claims of superiority cues (in WICS expressed as "advertising") and leadership cues (in WICS seen as "customer service") were measured not only in terms of their presence alone, but were also measured in terms of how the theme was presented to the web page viewer. The researcher again used WICS to assess this by accounting for the expression of these cues using text, pictures and/or multimedia (such as brochures, games, posters, and audio/video files). It is believed by the researcher that this information speaks to the level of accessibility and interactivity of the web site to the user.

Sample

The sample used in the study was of law enforcement agencies at the federal/national, state/provincial and local levels of government across eight nations. Only English speaking countries were chosen for the convenience of the researcher. Cities chosen were of only the most populous cities in each respective country that, in fact, had urban level law enforcement. The only data missing from the study was the state of Gujarat in India. That state was excluded from the study. The table below represents the sample sizes of agencies in each nation:

Nation	Number of agencies studied
India	45
South Africa	4
New Zealand	1
Australia	8
Ireland	1
United Kingdom	42
United States	67
Canada	21

The table below represents the overall sample sizes of each level of government:

Level of Government	Total number of agencies studied
Federal/National	11
State/Provincial	125
Local/Urban	53

Results

Navigation cues

Most agency web sites contained consistently located navigation bars for ease of user transaction. However, search engines were non-existent for over one quarter of all agencies.

Question	Percent present
Is a navigation bar present?	94.2%
Is a navigation bar consistently located?	93.1%
Is there a search engine?	71.4%

Product Description themed cues

Product description cues mostly describe the aforementioned "function" of the agency. These agency function cues are articulated across a wide range of topics. Additionally, the table below illustrates the medium in which these cues are expressed.

Question	Expressed in general or in text	Expressed in photo or picture	Expressed in some form of multimedia
Is there a link to the agency mission?	78.3%	N/A	N/A
Is there a link to crime data?	73.0%	N/A	N/A
Is there a link to hot spot maps?	20.1%	N/A	N/A
Is there a link to crime warnings?	76.7%	N/A	N/A
Is commitment to crime control expressed?	88.4%	54.5%	33.9%
Is commitment to public safety expressed?	92.6%	57.1%	38.1%
Is a commitment to community relations expressed?	92.6%	57.7%	38.6%
Is there an expression of special operation units?	73.5%	44.4%	25.4%

The above table illustrates that crime information cues are not present in almost a quarter of the agencies studied. A significant number (21.7%) of all agencies failed to put their mission statement on their website. Also of note, is the robust percentage of agencies who conveyed their commitments to both public safety and community relations compared to crime control. Lastly, the table illustrates stark differences in the utilization of different mediums to express the cues of product description with text being the most common, followed by pictures/photos and lastly multimedia.

Customer service themed cues

Customer service cues represent the agency's attempt at interacting with the public directly. Here recruitment information, precinct location and leadership information is expressed.

Question	% Expressed
Is there a link to recruitment information?	87.3%
Is local branch or precinct location expressed?	71.4%
Do agency leaders talk about their credentials?	46.0%
Is there a picture of the agency leader?	77.8%
Do agency leaders include a personal message?	48.7%
Is the personal message expressed using multimedia?	18.5%
Does agency leader include contact information?	38.1%

Of note in the above table is the one quarter of all agencies studied who did not include local agency branch locations. Additionally, pictures of agency leaders were significantly more frequent than all other leadership criteria studied. Agency leader contact information (38.1%) was especially low.

Claims of superiority cues

The "advertising" efforts of the agency were illustrated by examining the "claims of superiority" cues. Here, any visible expression of program successes, reductions in crime, rankings, or commendations were accounted for.

Question	% Expressed
Are claims of superiority expressed in text form?	51.9%
Are claims of superiority expressed in pictures or photos?	29.1%
Are claims of superiority expressed using multimedia?	19.0%

The above table illustrates the significantly low number of agencies who display their successes or preeminence. As with other variables, the more sophisticated mediums are less and less utilized.

Discussion

Across the law enforcement websites of the eight nations studied, content was legitimately robust. Generally speaking, the layout and design of these sites was fairly user friendly, with consistently placed navigation bars, few dead links, reasonable upload times and few convoluted sites. The exception here is so few search engines present that would augment the utility of the site and allow for the ease in retrieving information.

Also of note were the outpacing public safety and community relations cues had over crime control cues across the nations studied. It would seem that agencies are, in fact, using these sites to promote and foster greater public safety awareness and community relations. This may be the result of the cumulative efforts of the past several decades of community policing initiatives worldwide.

However, when taken alongside the "claims of superiority" cue, crime control cues are poorly represented. This is seen by the researcher as a significant missed opportunity. An agency website appears like an unadulterated occasion for that agency to publicize approbations or achievements. Yet given the evidence presented above, agencies could certainly afford to make enhanced use of their sites.

Along these same lines, leadership data such as contact information, personal greetings and leadership career backgrounds were also poorly represented. One is more likely to see a picture of an agency leader than hear from that leader or view their qualifications or even contact them in a more direct fashion. In the fields for customer service, it is seen as being important to illustrate who is in charge, and how we can have confidence in that person. Furthermore, law enforcement is a customer service industry a least in part. Having a contact point with that leadership can be important.

General interactivity was low across function cues. Based upon the above data, most law enforcement agencies fail to employ mediums other than text to express their functions, accomplishments and leadership data. Making the most of incorporating pictures and other multimedia such as video have been shown to increase how consumers regularly engage a site and trust that site. The lack of alternative mediums for delivering information, by in large, can leave sites listless, dry and lethargic to the eye.

The agency website provides an ideal occasion to act as a clearinghouse for searchable, pertinent information for citizens. The website is a chance to present the agency in a profession light, provide a touchstone for contact information, and inform residents as to public safety and agency performance. There were a significant number of websites that provided this information and provided this information in a user friendly, interactive fashion. Regrettably for far too many agencies, much of this critical data was poorly represented. Mission statements that were not provided or poorly placed, no precinct contact data, and little if any crime information.

Conclusions

Most agencies surveyed in this study had a significant dearth of information on their sites. However, information gaps were glaring and deficient in areas where they would render some sites impotent as a tool. At its core, these sites should contain information to act as a point of contact with the community. A significant number did not. These sites should, for transparency sake, contain professional data and local crime control data. A significant number did not. These sites should allow agencies to seize the opportunity to generate its own positive announcements for its deeds. A significant number did not. These are not, in fact, budget breaking additions to the web page. A sound agency web page should contain these.

The purpose of this study was a mere exploratory content analysis. The data collected needs further examination to unearth possible connections between countries and their web page content survey results. Additional investigations will be conducted regarding level of government agency as well. The above research should act as a firm foundation for future research in to actual user preferences of those utilizing agency web sites and those who seek similar information. In total, it will be interesting to test the impact changes to web pages makes. Will it, in fact, allow these pages to become more heavily relied on by the public at large.

Over the past decade, the traditional storefront or front desk has had its role curtailed significantly by the business web site. Today, so much of a company's business is done via the web. To this end, it's important that the information contained on that site reflect accurately an attractive product and that transaction protocols be user friendly. Law enforcement web pages are seemingly becoming the stationhouse of our times. Citizens have the chance to interact, become informed and utilize services offered by law enforcement. The results of this study, though far from conclusive, indicate that while many are on the right track, others must rise up or lose the attention of the virtual public.

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