CHAPTER THREE – Approach to Web Site Analysis, Focus Groups, Questionnaire

The methodology for this exploratory study incorporates qualitative measures for an analysis of selected state and federal government web sites, the use of focus groups, and survey research. The web site analysis component, whose methods will be delineated later in the web site analysis section, explores the normative and aesthetic dimensions of web sites. The normative dimension refers to the extent to which certain key norms are fulfilled and or emphasized in web site architecture while the aesthetic dimension refers to whether certain technical features of what is considered good message design or high message quality are present. These two concepts will also be explicated in the web site analysis section.

Focus groups and survey research were employed in tandem to cross-check or triangulate the information derived from the web site analysis component against the data emerging from these independent sources (Locke, Silverman, & Spirduso, 1998). The focus groups were used to (1) broadly examine and explore the concept of e-government, (2) review and critique its cyberspace manifestation through the viewing of selected web sites and (3) to consciously reflect on the implications of e-government using the expressive, behavioral, and societal lenses based on the preceding two activities. The expressive lens includes, but is not limited to, the ideas and or values (normative considerations) that may be embedded in web site design features. The behavioral lens includes, but is not limited to, consideration of aesthetic design features that affect user conduct such as the use of color, coherent organization of material, and ease of use. The societal lens addresses issues such as the use of symbols of power or status on the web site and impressions conveyed to the public by web site design. Focus group reflections were followed by the administration of a short ten question questionnaire to focus group members—the respondents. The questionnaire was developed to build upon the focus groups' explorations and discussions by gauging the respondents' relative knowledge of, opinions on, and attitudes toward e-government.

Web Site Analysis

The analysis or evaluation of web site content is a recent phenomenon the history of which parallels that of the emergence of the Internet as both a commercial and governmental medium for consumer and citizen interaction. Various commercial firms specialize in evaluating both public and private web sites along functional dimensions focusing on usable content, useful links, available user transactions, user traffic, and other related criteria. There are also a host of web site evaluation methodologies that run the gamut from using proprietary evaluation software, content analysis, and user surveys to phased web site evaluation at each stage of web site development, e.g., from conceptualization to implementation (Barker, 2003; Bauer & Scharl, 2000; Engle, 2003; Layne & Lee, 2001; Lederer, 2003; Tillman, 2003). No effort will be made to list or categorize all relevant web site evaluation methods. These methodologies are not the focus of this dissertation.

 The Center for Digital Government[1] located in Folsom, California, has evaluated local and state government web sites for several years. Professor Darrell M. West of the A. Alfred Taubman Center for Public Policy and American Institutions[2] at Brown University in Providence, Rhode Island, has evaluated local, state, and federal government web sites for several years. Both organizations employ similar evaluation criteria. Rankings based on these two organizations' annual evaluations are widely published and cited. The high ranking of a web site by either or both of these organizations, i.e., within the top ten, has become a measure of success for a jurisdiction's e-government efforts. It is quite common for highly ranked web sites to prominently display some notice of the award on their site. Examples of common evaluation criteria used by both centers are: (a) a visible privacy statement, (b) a written policy or program for implementing Web accessibility standards, (c) functionality, and (d) participation. West's

---

[1]The Center for Digital Government is a national research and advisory institute providing industry, government, and education leaders with decision support, research and services to help them effectively incorporate new technologies in the 21st century. Location: http://www.centerdigitalgov.com/

[2]The A. Alfred Taubman Center is devoted to inter-disciplinary research, teaching, and service on a wide range of policy issues, e.g., e-government, urban school reform, voting, and race and gender.
Location: http://www.brown.edu/Departments/Taubman_Center/index.shtml

methodology also incorporates an e-government index that is used for the overall ranking of state and federal sites along all criteria.

I approached web site analysis from two perspectives—the normative and the aesthetic. The normative refers to the extent to which four values: equity, privacy, publicness, and participation, are fulfilled or expressed by the web site. The normative perspective was adapted from West's previous analytical studies of web site content and organization (West, 2000; West, 2001; West, 2002). The aesthetic refers to whether eight criteria related to good message design or high message quality are present. The eight criteria are starkness, purpose, density, legibility, emotive, organization, human agency, and stability.

The aesthetic component was adapted from previous research in the areas of communication theory, information architecture, information and instructional message design, and information presentation (Fleming & Levie, 1993; Tufte, 1990; Tufte, 1997; Wurman, 1990; Wurman, 2000). The aesthetic component of this exploratory project represents an effort to move beyond the usability assessments of e-government web sites which are the mainstay of most evaluative efforts.

Normative Component

During the past three years, West has evaluated state and federal e-government service delivery in three studies. His most recent one, *State and Federal E-Government in the United States, 2002*, examined 1,265 state and federal government web sites (West, 2002).

West's 2002 analysis, consistent with his previous two studies, focused on 24 specific web site features or criteria organized around a "citizen's perspective" on e-government. His interest was in locating web site content that would "aid an average citizen logging onto a site"—initiating a public encounter in cyberspace. Examples of the content criteria used by West include: office phone numbers, online publications, online databases, foreign language or language translation, advertisements, user payments or fees, multiple indicators of security policy, several measures of privacy policy, e-mail addresses, search capability, subject index, comment forms, automatic e-mail updates, personalization, and various measures of handicap accessibility.

Although West's studies did not explicitly address the normative aspects of web site design and content, he did however acknowledge the significance of emerging inequities in access to e-government services. More specifically, he was concerned about the types of services now moving online and how citizens might be affected.

> At the normative level, concerns already have been expressed about the gap between technology haves and have-nots (the so called 'digital divide'), and whether e-government will exacerbate inequities among citizens. With studies indicating that women, minorities, senior citizens, and the poor lack access to computers and the Internet, there is a need to chart what services are ending up online and how citizen access is being affected (West, 2000, p. 6).

West incorporated evaluative criteria in each of his three studies to assess to what extent web sites did or did not provide access to disabled individuals; did or did not contain privacy and or security policies regarding how personal information collected on sites would be treated or kept secure from tampering; and, did or did not contain specific features for promoting democratic outreach. West defined web site democratic outreach as the presence of interactive features such as chat rooms, e-mail, e-mail updates, personalization, and broadcasts that enabled communication between citizens and government.

I found West's discussion of the normative aspect of web site design and content intriguing not merely because it was very relevant to my research interests but also because I had both witnessed and experienced the effects of web site design deficiencies. In the first instance, I taught a class requiring extensive use of web sites. I happened to have a student who was severely vision impaired and could only view a web site using adaptive software to dramatically enlarge the text. On several occasions this student had difficulty locating a "text only" switching feature to replace the graphic content and as a result had trouble navigating the web site. My personal experience was also vision related. I am extremely myopic or nearsighted, over 40 years old, and even with corrective lenses I have difficulty reading some of the smaller web site text composed in 8 or 10 point font sizes. Researchers in the fields of instructional message

design and graphic design have established that text typed or presented in 10 or 12 point font size is the most readable (Fleming & Levie, 1993).

Value Constructs

In late October 2001, I contacted Professor West to arrange an in-depth telephone conversation to discuss his study methodology, its normative aspects, and my desire to adapt his prior work to explore the questions in my dissertation project. Specifically, I wanted to sound him out in regards to an idea for aggregating some of his evaluative criteria into four value constructs. We subsequently engaged in an approximately forty-minute telephone conversation on the issues. I explained the rationale for my normative focus, identified the value constructs and detailed the specific evaluative criteria from his work that I proposed to use to operationalize the value constructs. Professor West concluded that my approach was reasonable and quite interesting.

Selective criteria from West's schema were operationalized into the values of (1) equity, (2) privacy, (3) publicness, and (4) participation. These four values were used to address one of the key questions posed in this dissertation: What ideals and values are expressed in the design and presentation of e-government web sites?

The four values used were either explicitly or implicitly addressed in two sources discussed in Chapter II: (1) the National Academy of Public Administration's eGovernance initiative; or (2) the joint American Society for Public Administration (ASPA) and United Nations Division of Public Economics and Public Administration (UNDPEPA) report *Benchmarking E-Government: A Global Perspective* (Ronaghan, 2002). Also, these four values were addressed in the dialogue and related articles flowing from the Minnowbrook conferences of 1968 and 1988 respectively. The values were operationalized on the basis of five criteria or dimensions. Variables for use in SPSS data analysis were then coded and defined for the value criteria. A numerical value of "1" was assigned for the presence of a variable and a "0" for its absence. Additional variables were incorporated for recording the date the site was analyzed, type of site, the level of government, state name, state or federal agency/department abbreviation, federal agency or department name. One variable was added for West's 2002 study rankings of state and federal web sites and another variable was added for the Center for Digital Government's 2002 state rankings. Those

rankings were noted for later comparisons, where appropriate, to the normative and aesthetic analysis findings.   An explication of the value constructs, their constitutive criteria and operational definitions follow.

Equity

The concept or value of equity is one that permeates our society, government, and of course, the field of public administration. Issues of equity, more often than not, focus on the fair distribution of benefits and burdens among members of society. Equity relative to public administration theory and practice is more commonly linked to social equity literature and "new public administration" (Rohr, 1989, p. 64). New public administration is that stream of thought or philosophy that emerged from the turbulent 1960s and the first Minnowbrook (1968) conference that, among other things, sought to reconcile the field of public administration with democracy, promote relevance, encourage client-centered bureaucracy, and strive for social equity in solving problems (Marini, 1971).   Social equity has been a sustained theme in public administration for some time. The National Academy of Public Administration maintains a standing panel on social equity in governance.[3]

Almost twenty years ago, in 1974, *Public Administration Review* hosted a "Symposium on Social Equity and Public Administration."   The authors' articles from that symposium highlighted the need for both the public administration academic and practitioner communities to continue working towards assuring a fair distribution of benefits and burdens among members of society. The symposium represented a return to one of the core issues discussed and debated by public administration academics and practitioners at the first Minnowbrook conference or Minnowbrook I .   The issue of social equity was again revisited in 1989 in a series of *Public Administration Review* articles that emerged from the 1988 Minnowbrook II conference (Frederickson, 1989; Guy, 1989; Ingraham & Rosenbloom, 1989).

---

[3] The National Academy of Public Administration's web site for its Standing Panel on Social Equity in Governance may be accessed at: http://www.napawash.org/aa_social_equity/index.html

Other authors have examined the importance of equity considerations in public law, policy formulation and implementation, service delivery, management activities, public administration research, and public administration practice (Coates, 2001; Cooper, 2000; Denhardt & Denhardt, 2000; Frederickson, 1996; Kakabadse, Kakabadse, & Kouzmin, 2003; Kelly, 1998; Musso, 1999; Nye, 1999; Terry, 1998; Waldo, 1980; Wamsley et al., 1989).

The nexus between the concept of equity and public administration is at the heart of an ethically informed public service that seeks to give life and manifest meaning to the ideals "That all men are created equal," and ". . .a government of the people, by the people, and for the people. . . ."

Privacy

There is no right to privacy explicitly spelled out in either the Declaration of Independence or United States Constitution. The concept or value of privacy has emerged over time as a byproduct of the Supreme Court's interpretation of the First, Third, Fourth and Fifth Amendments to the U.S. Constitution. In 1965, in *Griswold v. Connecticut*, 383 U.S. 479, the Supreme Court held that these amendments in conjunction with the Ninth Amendment were the sources of a "penumbral" right to privacy (McClure, Hernon, & Relyea, 1989, p. 43). However, for explication purposes, the Fourth Amendment to the U.S. Constitution is the most relevant to the project.

> The right of the people to be secure in their persons, houses, papers, and effects, against unreasonable searches and seizures, shall not be violated, and no Warrants shall issue, but upon probable cause, supported by Oath or affirmation, and particularly describing the place to be searched, and the persons or things to be seized.

Since the nation's founding, the Supreme Court's interpretation of the Fourth Amendment has had to evolve in order to both acknowledge and incorporate consideration of the technological advancements in our society and the potential for abuse they pose by individuals and the state. Cooper has argued that, absent privacy, liberty is impossible and that much of our current

anxiety about privacy can be traced to past governmental abuses and disregard for privacy issues, e.g., the Watergate scandal of the early 1970s (Cooper, 2000, pp. 428-429).

Other authors have argued that the computer and its progeny (the Internet, e-mail, e-commerce, e-government) represent new threats to privacy as business, government, and individuals use and adapt these technologies for enhanced information gathering and surveillance (Castells, 1997; Fountain, 2001; Garson, 2003; Kamarck & Nye Jr., 2002; Kraemer & King, 1987; Lessig, 2001; McClure et al., 1989; Nelson, 2002; Saco, 2002). Privacy concerns are at the forefront of current debates on (1) how to prevent crimes such as "identity theft," (2) how much citizen personal information the government should have access to in its fight against terrorism, i.e., concerns about the USA Patriot Act, and (3) how government web sites can be protected from unauthorized intrusion by hackers[4].

Publicness

Publicness pertains to a web site's availability and openness to the general public within policy and statutory guidelines. Examples of guidelines, in contradiction to this value, could take the form of (1) excluding web site public comment on proposed regulations promulgated by an agency or department or (2) excluding web site submission of Freedom of Information Act requests (FOIA).[5] A web site's publicness can also be compared to the cheerful greeting and offer of help a public servant would provide to the citizen approaching a service counter. Publicness within the civic space created through the use of government web sites on the Internet is similar to that in traditional civic space. In the latter case, publicness refers to the space and its availability to the general public within limited or constraining guidelines, e.g., city council chambers with designated seating areas for the public or the White House with circumscribed public access areas.

---

[4] A person who uses computer expertise for illegal ends, such as gaining access to computer systems without permission and tampering with programs and or stealing data. An individual engaging in this type of activity is commonly referred to as a "hacker" and the activity as "hacking."

[5] The Freedom of Information Act (FOIA) became law in 1967 and has been amended several times since its enactment. FOIA requires government agencies to make their rulings, opinions, and statements of policy available to the general public.

The proxy for publicness in West's study was the availability of basic online information evidenced by address and phone information, publications, indexes, search features, databases, video, and audio clips. West viewed the presence of these features on the web site as useful aids for the citizen logging onto an e-government site. I incorporated the criterion of the "Welcome Message" display on the portal or home page because I believe its presence conveys both a willingness to provide service and perhaps helps decrease user anxiety.

Participation

Concerns about the absence, presence, or extent of citizen participation in the affairs of government have bedeviled the Republic prior to its establishment and ever since. The 1787-1788 Federalist and Anti-Federalist debates, over the proposed constitutional government, grappled with the issues of representation, suffrage, and government service. Although both political participation and opportunities for government service (employment) were initially limited to educated propertied white males, over time the concept has been expanded to include almost all citizens. Suffrage is now universal and men and women from diverse ethnic backgrounds and socioeconomic status are employed at all levels of government and similarly hold elective office at all levels. However, questions persist as to the extent and forms citizen participation should take in an extended representative republic that has been democratized over time. The Minnowbrook I and II conference perspectives on participation both sought to engender active citizen participation and viewed it as a measure of public administration's effectiveness (Frederickson, 1989). Other authors have also explored the questions of the extent and form citizen participation should take and its relevance to public administration (Alexander & Grubbs, 1998; Denhardt & Denhardt, 2000; Evans, 2000; Frederickson, 1997; King & Stivers, 1998).

The following section delineates the operational statements for each of the four values used in the normative component of the web site analysis (see Appendix A).

Operationalized Values

The **value of equity** is represented by the web site presence, or absence, of five criteria:

1.   TTY or TDD Phone Lines for the speech or hearing impaired.

A teletypewriter (TTY) or telecommunication device for the deaf (TDD) enables the speech and or hearing impaired individual to communicate with people by telephone. Title IV of the Americans with Disabilities Act requires all phone companies to provide support for these devices.

2.   Bobby approved for disabled individual access.

Bobby[6] is a free web site accessibility software evaluation tool created to help identify and repair web page barriers to accessibility and promote compliance with extant accessibility standards. Bobby also tests for Section 508 compliance.

3.   W3C[7] or Section 508 compliant.

The World Wide Web Consortium (W3C) has promulgated accessibility guidelines which focus on eliminating basic web site design problems that could prevent or impair use of a web site by disabled individuals. Section 508 of the Rehabilitation Act Amendments of 1998 established electronic and information technology accessibility standards for the disabled.

4.   Availability of a text version for the color blind or for individuals with low-speed modems.

Extensive use of color and graphics has become the norm for web sites. Web sites with high color and graphic content present potential barriers to

---

[6] The site has been rated disability accessible by the non-profit site rating group Bobby (www.cast.org/bobby/).

[7] The WC3 consortium organization was founded in October 1994. The organization develops interoperable technologies, standards, and software to optimize the utility of the Internet. Source: http://www.w3.org/

access. This is because the color vision impaired individual may not be able to see all the content and the high graphic content page may load much slower if the user only has access to a low speed telephone modem, e.g., 56K or less. In the latter instance, the user may become frustrated and or possibly incur additional telephone service charges.

5. Availability of foreign language translation for individuals who speak a language other than English or foreign language translation for the site impaired who do not speak English.

The United States has historically been a nation of immigrants and that reality is not likely to change anytime soon. Hispanic and Asian Americans represent a significant portion (approximately 16%) of the overall U.S. population based on data from the 2000 Census and for many of these Americans English is not their primary language. Text reading software programs for the vision impaired have been designed to scan web site text content in a variety of languages and automatically read that text for the user. However, the utility of these programs is foreclosed when the user has access to an English language only web site when he or she speaks another language.

The **value of privacy** is represented by the web site presence or absence of five criteria:

1. Prohibits Cookies - the site has language declaring that it does not use cookies or details their specific use and advises user he/she can opt out.

Cookies are small blocks of data a web server stores on the computer of the user who has visited a web site. Cookies may be used to identify a user's computer, collect data on the user's site visit activity, enable the user to customize a web page, enable a web site to profile the user's viewing preferences, and may contain user personal information.

2.   Prohibits Sharing Personal Information - the site has language stating that it does not share the user's personal information or details its specific use and advises user he/she can opt out from such sharing.

Generally speaking, the citizen attempting to complete an e-government transaction on an agency or department web site will be required to provide some personal identifying information such as a home address and or social security number. The citizen may rightly or wrongly assume, in the absence of a clear web site policy statement on information sharing, that the personal information they provided to complete the transaction will only be used by the agency or department to which it was provided.

3.   The site has language stating that it does not use software to monitor users while on the site or details how and why monitoring is conducted.

Web sites may use software to monitor users so that they can determine when unauthorized access attempts are initiated or for other site security purposes. These software programs are far more advanced than cookies and may be able to both identify a user engaged in illicit computer activity or scan a user's computer for personal information.

4.   Prohibits Commercial Marketing - the site has language declaring that it prohibits commercial marketing, i.e., does not sell or rent user information.

Telephone solicitations to purchase a product or service (telemarketing) have become the bane of most Americans' daily life. The Federal Communications Commission (FCC) established a National Do-Not-Call Registry[8] in July 2003. The registry was established to provide relief to the millions of Americans

---

[8] The Federal Communications Commission's National Do-Not-Call Registry may be accessed at
http://ftp.fcc.gov/cgb/consumerfacts/donotcallalert.html

receiving unsolicited telemarketing calls daily. Telemarketers obtain the names and phone numbers of the potential consumers they telephone from lists and databases they purchase or rent from public and private organizations, e.g., a department of motor vehicles or a retailer.

5.   The site has language indicating that users will automatically be notified by web broadcast if the security of the site is breached.

Web site security remains a concern for both the web site operator and user. Identity theft has become one of the fastest growing crimes in the United States and the Internet has facilitated its execution. Public and private organizations that maintain web sites for citizen and customer online transactions collect and maintain a wide array of personal information which is vulnerable to theft by the industrious hacker. If a user is notified by a web site that their personal information has been compromised, then that user may be able to take proactive steps to protect his/her credit and identity.

The **value of publicness** is represented by the web site presence or absence of five criteria:

1.   Welcome Message – a statement on the portal or home page welcoming the visitor.

A welcoming message on the portal or home page may convey a positive feeling or warmth that may help alleviate any anxiety or trepidation the first time visitor may feel. Admittedly the welcoming message may be a poor proxy for a smile and warm greeting in the physical plane which may serve to both calm and assure the citizen initiating a public encounter. However, it is better than nothing and may elicit similar emotions.

2.   Address or phone contact information for personnel who may be contacted when the citizen has a question not covered by site content or wishes to comment.

The web site-enabled public encounter is characterized by its noticeable lack of human-to-human interaction made possible by software that prompts or leads the citizen through a decision tree process to complete a given transaction. However, if the decision tree and or frequently asked questions (FAQ) section do not cover the issue at hand, the citizen should have an opportunity to follow up with someone—a human being.

3.   Publications – listing of downloadable relevant publications.

One of the many benefits of e-government is the ease of access to relevant agency or department publications and the ability to download (obtain a copy) for one's personal reference. An easy to find listing of these publications on the web site enables a user to save time by reviewing the publications and selecting publications that address the user's interest.

4.   Index – a site index or site map outlining the site's organization.

The web site portal or home page is analogous to the entry way of a high rise office building. The user can view the building lobby and directory and possibly gauge the relative number of offices in the building. However, the user cannot determine how extensive or interrelated the offices may be. Web sites can literally consist of thousands of pages or more of information and absent an index or site map the user can waste a great deal of time searching for information.

5.   Search – the ability to search within the site using keywords or phrases.

The web site search engine is a useful tool for the knowledgeable user who has some idea of what he or she wants to find. It enables the user to save time by using key words or concepts to locate information. Thus the search feature may limit or eliminate the need to view unrelated content and it is superior to the index or site map in this regard.

The **value of participation** is represented by the website presence or absence of five criteria:

1. E-mail - ability to e-mail individuals within the agency other than the webmaster.

    The ability to send electronic mail or e-mail to someone other than the site webmaster facilitates a degree of two-way interaction on the web site. It enables the user to request clarification on transaction questions, request assistance, or obtain the phone number and address of an office to visit or phone. E-mail that can only be directed to a webmaster may inhibit or frustrate the user's efforts to secure information and or service not included in the web site content.

2. E-mail updates – ability to notify the citizen of activity or additional information availability by e-mail.

    Web site e-mail update capability helps facilitate interaction between the agency or department web site and the user. A user that has expressed an interest in participating in public hearings, city council meetings, zoning requests, etc., can be notified via e-mail in advance and thereby have an opportunity to participate. E-mail update capability could also be used to advise the citizen of a change in the refuse collection schedule or to announce a new online transaction service for paying property taxes.

3. Comments – ability to make comments on the site and or services delivered.

    The ability for the user to comment positively or negatively on the information and services provided on the web site is important. This feedback, if used appropriately, can acknowledge successes and or correct problems in web site based transactions and or information. The more citizen-centered web sites will tend to prominently display a home page link to "Site Satisfaction Surveys" or "Comments" section.

4.   Personalization – ability to customize the site to suit the citizen's interests.

The personalization feature enables the user to pick and choose what information and or services they want displayed when visiting the web site. This saves the user time and helps the agency or department gauge which information and or services are the most frequently used. The personalization feature is not universally offered. Those web sites that do employ this feature frequently request additional information on the user when the user chooses to signup for the service.

5.   Broadcasts – the use of streaming audio and or video for public hearings, speeches, etc.

Web site broadcasts afford the user with an opportunity to see and or hear the agency or department in operation. Sometimes the streaming audio or video is real time, that is to say, the broadcast is contemporaneous with the event. In rare instances an agency or department may host live question and answer sessions in which the user e-mails a question to an official who responds online via streaming audio or video. Such broadcasts may provide the user with participation opportunities that would not be possible in the traditional settings of physical space.

Web Site Sample Selection

I utilized West's 2002 study to develop my web site sample. In that study, West analyzed a total of 1,245 state and federal government web sites. The distribution of West's web sites was as follows: 1,206 state websites, 45 federal government legislative and executive sites, 13 federal court sites, and 1 federal portal site. At the state level, West examined an average of 24 websites. An important byproduct of West's analysis was the development of overall rankings for both the state and federal web sites. Rankings were derived from index scores.

West developed a 0 to 100 point e-government index which he used to rank the fifty states and 59 federal agency/department web sites along a continuum from high, average, and low e-government service capability. A web site's index value represented the overall e-government service delivery capability of that site. To construct the index, West assigned four points to each of his twenty-four evaluation criteria and one point for each online service. West defined online services as those services that the general public could fully execute online. I plan to incorporate West's rankings in my web site analysis. In addition, I intend to construct indices for both the normative and aesthetic web site analysis components of this project which I subsequently will compare to West's index values.

The state and federal government web site samples selected for use in this project were picked to encompass West's three continuum categories. West's index ranked fourteen states high, three low, and the remaining thirty-three average. I limited my examination of state web sites in this project to the 50 state primary portals or gateway sites. These sites are of particular note because there is some evidence that they are becoming the cyberspace proxy for the state capitol dome as well as the primary citizen access point for state services (Taylor, 2002).

My federal website sample included all 59 of the agency/department portal or gateway sites West examined. The overall resultant sample totaled 109 web sites comprised of all 50 state portal sites and 59 federal agency/departmental sites. All 109 web sites were analyzed using the criteria for the values of equity, privacy, publicness, and participation. An index was then constructed from the respective value scores to represent each site's overall normative character.

Aesthetic Component

The aesthetic component of my analysis provides a basis for discussing the message quality component of e-government architecture and helps ground the multidisciplinary aspect of the project. This approach also provides an opportunity to explore and differentiate between low and high quality messages contained within the aesthetics of e-government architecture. These messages arise from the way in which the information is envisioned, transcribed, and incorporated within the web site for communication with the citizen.

The aesthetic perspective is by its very nature highly subjective. However, this subjectivity can nonetheless be bounded by adapting the work of others who have studied, researched, and identified the salient aspects of information architecture—design, organization, and presentation. The analysis variables used for this portion of the web site analysis were derived from the collective works of Fleming and Levie (1993), Tufte (1990, 1997), and Wurman (1990, 2000).

Fleming and Levie's work in *Instructional Message Design: Principles from the Behavioral and Cognitive Sciences*, though primarily focusing on issues related to classroom instruction, nonetheless addresses key principles that should be taken into consideration whenever "instruction" or "communication" are the objectives of message design activity (Fleming & Levie, 1993). This is the case with much web site content today. "Message" and "design" in the preceding context are defined as follows:

> A "message" is a pattern of signs (words, pictures, gestures) produced for the purpose of modifying the psychomotor, cognitive, or affective behavior of one or more persons. The term does not imply any particular medium or vehicle of instruction. "Design" refers to a deliberative process of analysis and synthesis that begins with an instructional problem and concludes with a concrete plan or blueprint for a solution (Fleming & Levie, 1993, p. x).

The e-government web site transaction and related dissemination of information are byproducts of a hybrid instructional message design approach. Fleming and Levie identified specific principles of good instructional message design. Included among those principles were the appropriate use of colors, graphics, organization of text, pictures that included people, and white space.

Fleming and Levie argued that readers tend to be more interested in colored pictures than in those without color but, cautioned that the wrong color could distract. Unfortunately, the authors did not elaborate on what constituted a "wrong colored" picture. This omission on their part

may be a case of their wanting to steer clear of controversy. They do note however that empirical evidence on the emotive properties of color in message design is limited:

> A great many claims about the affective impact of color have been made, some of which have been investigated (for example, Winn & Everett, 1979), but few of which have been substantiated firmly enough to lead to design principles. What is more, most recent research on color has tended to address problems at a very basic psychophysiological level that is of little value to message designers. . .All of this points to the trickiness of color as a message design variable (Fleming & Levie, 1993, p. 96).

Although the empirical evidence for color use in message design is thin and its use may therefore be a tricky proposition, there is nonetheless a cultural context that may be useful to consider in message design. For example, movies and television use black garbed actors to signal the viewer that a particular character is the "bad guy" or villain. Similarly, the metaphor for an approaching storm or impending danger is the blackened sky. White magic is good and black magic is not. The color red is associated with blood and with rage as in "I am so angry, I am seeing red." Red is also associated with both warning and stop signs. The preceding examples highlight the latent cultural messages the use of particular colors by the designer may unwittingly convey to the reader.

Tufte's work in *Envisioning Information* and *Visual Explanations* provide a framework for questioning both the value and or significance of the information provided and examining the complex design factors that either add to or detract from its understanding. Tufte both explores and describes principles of good information design, e.g., appropriate use of colors, space, text, data density, and clarity (Tufte, 1990). Tufte argues, in part, that poorly conceived information design, such as that contained in ill conceived charts, i.e., "chartjunk," conveys unflattering messages with respect to how the designer views the audience. Tufte's assessment of the effects of chartjunk on an audience may also be expanded to include the use of poorly conceived web site graphic images. At a minimum, I would argue that graphic images used in e-government web site content should add coherence to the overall presentation by helping to identify the

organization and by reflecting its mission and or function. Poorly conceived graphics, like chartjunk, convey the wrong message. That message is (1) that "the reader is obtuse and uncaring," and (2) that the designer does not respect the audience (Tufte, 1990, p. 34). In both instances, the potential for communication is damaged.

Good graphic design relative to the display of closely-read data, whether on paper or a computer screen, requires skilled craftmanship in typography, object representation, layout, color selection, and other related techniques (Tufte, 1990, p. 35). Tufte states that text typed in all capitals has the lowest readability factor and that colors found in nature such as the blues, grays, and yellows of the sky are best suited for representing and illuminating data. He also noted that the dominant use of black text on a white background on a web site suggests that the work is unfinished and or cheaply designed.

It is important to keep in mind that a *web site could conceivably be content or feature-rich—but message-poor in terms of communicating its information to an audience*. Poorly stated messages qualitatively affect the public encounter. Ambiguous or erroneous instructions contained in poorly stated web site messages may create confusion, misunderstanding, or frustration for the citizen trying to obtain services or information. The e-government web site is an amazing medium for facilitating easier citizen access to services and enormous amounts of information. Yet the e-government web site can also be a very complex environment to navigate. The work of Fleming and Levie focused on the quality and character of the messages or instructions required to navigate that environment. Tufte focused on the appropriate presentation formats and design aids to improve the reader's understanding of information. Wurman's efforts examine the consequences to understanding resulting from the ever increasing quantities of information we are confronted with in our daily lives.

Wurman coined the expression "information anxiety" as a measure for our possible reaction to and feelings about the growing tide of information confronting us daily. He argues that information has become a central aspect of our lives and that the increasing amounts of it we must navigate daily, at home and at work, has made most of us anxious. This anxiety has several dimensions but the most relevant dimension for this project is that of comprehension.

Information anxiety is produced by the ever-widening gap between what we understand and what we think we understand. Information anxiety is the black hole between data and knowledge. It happens when information doesn't tell us what we need or want to know (Wurman, 1990, p. 34).

Wurman also contends that the heart of the information anxiety problem is not the information but the facts masquerading as information. Information absent a context for understanding is not information but rather a mere collection of facts. He argues that unorganized, context-less facts do not possess meaning (Wurman, 1990, p. 36). Wurman's research and some of his related recommendations for ameliorating information anxiety are particularly relevant to the information (or fact) rich environment of most e-government web sites.

Wurman views the organization or grouping of ideas as a key aspect of effective communication. He also argues that in order for an individual to learn and understand, the individual must first be able to make connections. Relative to the e-government web site this means that the design should evoke recognition of the organization and a degree of understanding of its purpose or mission. Wurman believes that learning builds upon something the individual already understands and that new ideas associate themselves with old ones (Wurman, 1990, p. 168). If this is indeed the case, and I believe it is, then perhaps e-government web sites should explore ways in which the physical and cyberspace organization presentations present a unifying theme.

In the preceding discussions, I have explored some of the core principles of instructional message design documented by Fleming and Levie and the relevance of those principles to e-government web sites. I have also reviewed selective information presentation and design approaches researched by Tufte and noted their importance to e-government web sites. Wurman's work was discussed to expand upon the notion that the e-government web site is also a complex fact rich learning environment and that care must be taken with respect to the instruction provided therein. These discussions and related observation, as noted earlier, help underpin the aesthetic analysis and bound its otherwise subjective character. They also provide the needed framework for developing aesthetic concepts for analyzing the sample e-government web sites from an aesthetic perspective. We now turn to that framework.

Aesthetic Constructs

Eight constructs were developed for the aesthetic component of the web site analysis. An explication of the aesthetic constructs, their constitutive criteria and operational definitions follow.

Starkness

Web site and instructional courseware designers frequently try to place far too much text on the computer screen or printed page. The result is generally an overly crowded presentation of the material that is both difficult for the individual to follow and which also appears less than professional. The added irony is that the presentation appears stark because the screen or page is dominated by black text on a white background. This starkness would also exist in a situation in which too much text of any color is crowded onto a non-white background. Generally speaking, the better design approach is one in which text or white spaces do not overpower and graphics or illustration is incorporated to break up the monotony. Fleming and Levie argue that this approach aids in maintaining learner (reader) attention (Fleming & Levie, 1993, p. 33).

Purpose

There are literally millions of web sites on the Internet. These sites are hosted by commercial enterprises, educational institutions, gambling concerns, nonprofit organizations, religious organizations, and individuals. Factors that usually differentiate these web sites from one another are their uniform resource locator[9] (URL) address, their site design, site content, and features. The individual citizen attempting to initiate a public encounter by visiting an e-government web site should not have to wonder whether or not he is on that site upon arriving at it. The presence of graphic images that reflect the mission and or function of the organization would help orient the citizen and may help eliminate or reduce any potential ambiguity or confusion (Wurman, 2000, p. 131).

---

[9] An address for a resource on the Internet. URLs are used by Web browsers to locate Internet resources. A URL specifies the protocol to be used in accessing the resource (such as http:// for a World Wide Web page or ftp:// for an FTP site), the name of the server on which the resource resides (such as www.whitehouse.gov). Http is the acronym for Hypertext Transfer Protocol. It is the protocol used to carry requests from a browser to a Web server and to transport pages from Web servers back to the requesting browser. Although HTTP is almost universally used on the Web, it is not an especially secure protocol. FTP is the acronym for file transfer protocol. A file server that uses the File Transfer Protocol to permit users to upload or download files through the Internet or any other network is an FTP site. Source: (2001) Microsoft Encarta World English Dictionary.

Density

The computer screen can display less text than a printed page. This is one reason designers try to condense text so that they can get more text on the screen—thereby creating the starkness problem. Designers trying to avoid the starkness problem will often resort to expanding home page or portal content to encompass two or more pages. This design approach is not always wise because it plays to the inherent weakness of the computer interface—the constant context switches that occur as the user scrolls through the web site content (Tufte, 1990, p. 50). A home page or portal page's content that spans several pages may undermine user comprehension and thus diminish the information itself (Wurman, 1990, p. 115).

Legibility

The general consensus is that both font size and type matter in message design. Fleming and Levie argued that 10- to 12-point type made text easier to read. Tufte noted that all capital letters and certain elaborate fonts were more difficult to read. For the ever increasing number of Americans over the age of 40, small type of any sort is difficult to read.

Emotive

Tufte argued that a natural color palette should be the designer's preference for representing or highlighting information. The natural palette consists of blues, yellows, and grays. He stated that "Nature's colors are familiar and coherent, possessing a widely accepted harmony to the human eye—and their source has a certain definitive authority" (Tufte, 1990, p. 90). Fleming and Levie on the other hand argued that insufficient empirical research had been conducted on the affective impact of color to develop design principles.

Designers may use a natural palette or a variety of other colors in constructing web site content, i.e., red, black, orange, etc. Although the empirical evidence for color use in message design is thin and its use may therefore be a tricky proposition, there is nonetheless a cultural context that may be useful to consider in message design.

<u>Organization</u>

Fleming and Levie, Tufte, and Wurman generally agree that the use of white or blank space in organizing information is an important design consideration. Fleming and Levie stated that white space should be used to tie or "chunk" similar elements together visually. Tufte argued that the organization of the blank space in written or printed material can either enliven it or render it lifeless. Wurman stated that the blank space or the space between things provides an opportunity to really see—perhaps even the unexpected. The stark web site represents the antithesis of this approach to organizing information.

<u>Human Agency</u>

The inclusion of pictures of people in web site content accomplishes two very important functions. Fleming and Levie observed that the inclusion of pictures of people can help gain and maintain the user's attention. Second, I would argue that the use of pictures with people also helps reinforce the connection between human agency and government operation. From my perspective, the second function is the more important of the two. E-government is a very valuable complement to traditional government operation but, at the end of the day, government is a uniquely human endeavor which should not be confused with software functionality.

<u>Stability</u>

The United States has not only borrowed Greco-Roman ideas about governance and organization, we have borrowed architectural forms, language, and meanings. Those ideas are timeless just as is their architectural legacy. The Founders chose to emulate classical architectural forms in the buildings of the early Republic to project both the power and permanence of the new regime.

The architectural styles of many government buildings are intended to reflect both their function, the values of the regime, and a tradition of service. These buildings may also serve as symbols of regime longevity and stability just as the buildings of the ancient Greeks and Romans were intended to do. Thus, the state capitol domes, older period post office buildings, county courthouses, city halls, town halls, United States Supreme Court building, Library of Congress, and other similar structures constitute the physical manifestations of our government. These

buildings serve to remind the people that government is more than an abstract concept—that it is quite real and represents certain values. E-government web sites should do no less and by incorporating an image of a building on these sites the link between people and their government is acknowledged.

The following section delineates the operational statements for each of the eight values used in the normative component of the web site analysis (see Appendix B).

Operationalized Constructs

1. Starkness   Did the designer(s) avoid dominating the site with black text on white space?

2. Purpose   Do graphic images reflect the mission and or function of the organization?

3. Density   Does the web page fit on one screen?

4. Legibility   Do the fonts and font sizes used add to the site's legibility?

5. Emotive   Is a natural color palette used, e.g., blues, yellows, grays of sky?

6. Organization   Does the site use white space to appropriately organize the information presented?

7. Human Agency   Does the site contain images of people other than that of the governor or agency/department head?

8. Stability   Does the site contain an image of a building representing a physical presence and stability?

The aesthetic construct SPSS coding variables and operational definitions are referenced in Appendix B. All 109 web sites were analyzed using the eight aesthetic constructs. An index was then constructed from the variable scores to measure each site's overall aesthetic character.

Focus-Groups

Focus-groups methods are used in a variety of research efforts. They may be used in applied research projects such as program evaluations, exploratory research in a new topic area, and in qualitative academic research. The use of focus-group methods by researchers to obtain qualitative data is a well established practice. Generally, focus groups are semistructured discussions by small groups of participants about a common topic or experience (Miller & Whicker, 1999; O'Sullivan & Rassell, 1999). The focus group approach also has the following other identifying characteristics: (1) the focus-group interview is used to get in-depth information, (2) it is limited to a small range of topics, (3) focus-group discussion is facilitated by a moderator, (4) focus-group size is generally limited to 5-8 members, and (5) focus-group use is appropriate when the objective is to develop explanations or hypotheses. Focus groups were used in this project to refine, distill, uncover, challenge and or illuminate the exploratory findings, propositions and preliminary conclusions emerging from the web site analysis. Steps were taken in the selection of the moderator and group members to minimize the downside potential of the focus-group method, e.g., moderator domination of discussion, member reticence, or group dynamics set off by prior member association. A discussion of focus-group participants and the approach used in this project follows.

Focus-Group Participants

Two focus groups were formed to determine if group outcomes could be replicated. Each of the two groups consisted of seven members. Focus-group participants included (1) academic faculty, (2) graduates of or graduate students enrolled in a Public Administration program leading to employment as a public administration practitioner, (3) established public administration practitioners with varying levels of organizational and administrative discretion, and (4) university employees. The composition of both focus groups included representation from each participant category. All of the focus-group participants either worked for or were affiliated with Virginia Tech, were computer literate and had used the Internet, and had heard of e-government. Participants' ages ranged from the 18-24 year old category up to and including the 60-64 year old age category.

Academic faculty were selected because the academic instructor at Virginia Tech (and probably at most other universities) of necessity has had to acquire some knowledge of how to use the Internet. An ever increasing number of academic journals are offered in electronic form via the Internet and faculty are also increasingly expected to use the Internet and university provided software as a complement to traditional classroom instruction. University provided courseware such as Blackboard[10] enables an instructor to post his/her course syllabus, course readings, and other reference materials on a university server where students enrolled in the class may access the information. Academic faculty in general are not a part of the generation that grew up digitally—so to speak.

Public Administration program graduates and graduate students were selected because they represent the first generation to grow up digitally. Their attitudes about e-government are of particular importance because they may represent the attitudes of those least likely to be deterred by technological complexity and those most likely to use e-government services.

Established practitioners were selected because they are in the crucible of e-government implementation. Their organizations either already have an e-government presence on the Internet or are working hard to establish one. These practitioners may or may not have considered the implications of e-government within their organization. At a local government conference where I presented on e-government, I found that some local government practitioners had little or no awareness of the heightened organizational liability or normative implications of e-government implementation within their communities.

University employees were selected because, for the most part, their day-to-day work activities require that they use Virginia Tech's online systems and procedures to accomplish their job functions. These employees also have had to use the Internet on a daily basis and have heard of e-government.

---

[10] Blackboard is a proprietary software package used by Virginia Tech faculty to host Internet accessible class related information and activities.

<u>Focus-Group Approach</u>

The focus group sessions were conducted July 10 and 22, 2003. I secured the services of a skilled moderator to lead the discussions and record the outcomes. Approximately an hour to an hour and a half was allocated for each focus group session. Each focus-group session was organized around three discrete activities (1) a word association exercise and discussion, (2) a review and critique of selected web sites, and (3) completion of a short questionnaire. The researcher was present for the entirety of both focus group sessions but did not participate in the activities or any related discussions.

The moderator provided the researcher with approximately three minutes to broadly outline the research project. Immediately following that activity, the moderator then conducted an ice-breaking exercise to initiate focus group discussion which was then followed by a word association exercise. Focus-group members were asked to verbalize the immediate thoughts that came to mind when they heard the expression "e-government." The moderator encouraged the group to discuss their thoughts and elaborate. The moderator recorded the groups' responses on chart paper. The recorded responses were turned over to the researcher at the end of each session.

The web site component followed the word association activity. Each group was asked to view a total of twelve web sites—six state portal sites, five federal agency home pages, and one federal portal. Representative web sites along West's continuum were selected. The web sites were projected onto a projection screen using a laptop computer connected to the Internet and configured with a projection device. Where these web sites fell on the continuum was not disclosed at the beginning or at the end of the focus group session. No prior discussion of web site analysis factors such as site organization, use of colors, text readability, ease of finding information, potential messages conveyed by site organization, etc., took place. Focus-group participants were asked either to jot down their initial reactions to the sites they viewed and/or to comment so the moderator could record their responses on chart paper. The moderator encouraged focus-group participants to discuss their responses. Both of the focus-groups elected to have the moderator record their respective comments on chart paper. The moderator gave the recorded responses to the researcher at the end of each session. At the conclusion of each of the

focus-groups viewing and commenting on the twelve selected web sites, a ten question questionnaire was administered.

Questionnaire

Questionnaires like focus-groups are used in a variety of research projects. They are used in academic, public policy, and public management research projects.   Researchers use questionnaires to gather information on the attitudes, behaviors, knowledge, motives, and opinions of individuals relative to specific issues or topics (O'Sullivan & Rassell, 1999). The categories of questions asked tend to mirror the type of information the researcher is trying to obtain, i.e., behavior, knowledge, opinion.   There are two types of question formats used in questionnaires.   Those two types are (1) the open-ended question and (2) the closed-ended question.

The closed-ended question can take three forms. Those forms are (a) the Likert scale response, (b) the forced-choice response, and (c) the rank or rate response. The Likert scale question form is often used to measure the attitudes or opinions of individuals.   Likert scaled questions generally ask a respondent to indicate their level of agreement or disagreement along a scale of choices to an advanced proposition.   The forced-choice response question, a variation on the Likert scale form, does not include responses such as "not sure," "no opinion," or "other."   The rank or rate question form requires the respondent to rank several items using a range of values such as assigning a "10" to the highest priority item and a "1" to the lowest priority item.   A subtle variation on this form is the forced-ranking or rating question in which the respondent may only use a value once as in "rank the priorities below with 1 being the most important and 4 the least. . .Note: none of the priorities should have the same value assigned."

A ten question questionnaire employing Likert scale and forced-ranking questions was developed for use in this exploratory project. It was designed to collect nominal level data to measure citizen perceptions and attitudes about e-government. The questionnaire was adapted in part from two 2001 surveys of bureaucrats and citizens conducted by the Hart-Teeter polling organization for the Council for Excellence in Government (Hart-Teeter, 2002a; Hart-Teeter,

2002b). The questionnaire was administered by the focus group moderator at the conclusion of each focus group session. The use of focus group members as respondents to the questionnaire constituted a purposive nonprobability sampling approach. The moderator provided each focus group respondent with a questionnaire and pencil for recording their responses. Approximately fifteen to twenty minutes was allocated for questionnaire completion. The moderator collected the completed questionnaires at the conclusion of each focus group session and gave them to the researcher. All of the members of the two focus groups completed a questionnaire for an n size of 14.

Questions

See Appendix C for a facsimile of the questionnaire. The questions developed were designed to further refine, distill, uncover, challenge and or illuminate the exploratory findings, propositions and preliminary findings emerging from both the researcher's web site analysis and focus group exercises.   The questions fell into four categories (1) Familiarity with E-Government (2) General Attitudes Towards E-Government (3) Attitudes Toward Web Site Features and (4) Demographics, as explained below.

Familiarity with E-Government

Question No. 1: How familiar are you with "e-government"?

This question uses a Likert scale to assess the respondent's familiarity with e-government. Possible responses varied from "very familiar" to "not at all familiar" and include a "not sure" response choice. Focus group participants, who were also the respondents in the questionnaire, were selected using several criteria. One key criterion was the assumption that the participants had some degree of familiarity with e-government. This question seeks to validate that assumption and to elicit their opinion of their degree of familiarity.

<u>General Attitudes Towards E-Government (Questions 2-4)</u>

Question No. 2: Overall, what effect would you say e-government is having on the way government operates?

E-government has substantially matured since 2000 when the push towards its broad implementation at all levels of government was initiated. Almost all local, state, and federal government operations have an Internet web site presence of some sort. Current evaluations or assessments of e-government efforts, as noted earlier, tend to focus on functional features, services offered, available information, and usability issues while the current consequences for traditional government of e-government operation are largely unaddressed (Fountain, 2001).   This question seeks to determine: (1) does access to e-government web sites and related services/information translate into positive attitudes about government operation in general and (2) whether e-government is possibly a perceived proxy for better government. Possible responses for this question ranged from "very positive" to "very negative" and included a "not sure" response option.

Question No. 3:   And, looking ahead three to five years what effect do you think e-government will have on the way that government operates?

The design and content of e-government web sites has dramatically improved in the past three years and likely will continue to do so. A 2002 study of 1,265 state and federal government web sites reported that 43% of web sites now have some form of a privacy policy, 28% have some form of disability access, and 23% provide some services that are fully executable online. That study also noted that the most frequently provided online services were tax filing, driver's license renewal, and the ordering of hunting and fishing licenses(West, 2002).   However, user concerns about personal privacy and web site security persist (Hart-Teeter, 2003).

This question probes user attitudes on e-government's long-term effect on government in general.   A positive attitude could indicate an expectation that whatever problems confronting e-government will be resolved, that e-government services will likely expand

and that government as a whole will be improved as a result. A negative attitude could speak to a latent or explicit belief that neither e-government nor any other reform initiative can substantively change the way government operates—for the better or reflect a negative attitude about potential long-term adverse consequences to government operation that could arise from the expansion of e-government. Response choices for this question ranged from "very positive" to "very negative" and included a "not sure" response option.

Question No. 4: In your view, how high a priority should it be for government to invest tax dollars in making information and services available over the Internet?

The nation as a whole has been in an economic downturn since 2001. This sustained economic downturn has generally resulted in decreased tax revenues, budget deficits and corresponding service reductions at the local and state levels.   State and local governments have had to make difficult choices about the type and scope of direct services they could fund with shrinking tax dollars, e.g., education, Medicaid, and so forth. A willingness to commit tax dollars in pursuit of a policy and/or program is an accepted measure of endorsement and commitment to these matters. This question is intended to examine (1) the extent to which the attitudes of users of e-government signal an endorsement and commitment to e-government and (2) whether e-government service delivery is viewed as a complement to or substitute for traditional direct service provision. Response choices for this question ranged from "very high priority" to "very low priority" and included a "not sure" category.

Attitudes Toward Web Site Features (Questions 5-9)

Question No. 5: In order of importance, with 1 being the most important and 4 the least, rank the priorities listed below for government web sites. Note: none of the priorities should have the same value assigned.

E-government web sites as noted earlier have improved dramatically since 2000. However, there is still significant room for improvement. The 2002 study referenced

previously reported that 72% percent of state and federal state web sites did not have any form of disability access, 57% did not have some form of privacy policy, and 67% had no fully executable online services.

This exercise in forced-ranking is intended to examine whether (1) user attitudes toward e-government web sites reflect concerns about functional deficiencies in site design, i.e., legibility, organization and so forth; (2) if they do, then what issue elicits the most concern, (3) how do these issues compare with the focus group feedback in both the word association exercises and web site critiques and (4) how do these issues compare with the researcher's aesthetic web site analysis component?

Question No. 6: In order of importance, with 1 being the most important and 4 the least, rank the priorities listed below for government web sites. Note: none of the priorities should have the same value assigned.

A great deal has been written about the concept of the "Digital Divide," the gap between the information haves and have-nots or between those with Internet access and those without it. Some of the factors contributing to this inequality of access to information are education level, socioeconomic status, and infrastructure location differences such as those between the urban inner-city, rural areas, and the suburbs (Coates, 2001; Garson, 2003; Lenhart et al., 2003; Sunstein, 2001; Tapscott, 1997). My assumption is that public administration students and practitioners should have some level of familiarity with and a related concern about social equity issues relative to the delivery of government services.

This forced-ranking question is intended to validate the above assumption and examine whether (1) user attitudes in prioritizing specific feature requirements for e-government web sites reflect a consideration of social equity issues and related values and (2) how or if these attitudes compare with the comments and discussions arising from the focus group word association exercise and web site critiques.

Question No. 7: Reading from the following list of potential positive things that may result from e-government, rank the importance of the listed items on a scale of 1 to 4, with 1 being the most important and 4 the least. Note: none of the items should have the same value assigned.

This forced-ranking question is intended to examine: (1) whether user attitudes in prioritizing expected e-government benefits mirror in whole or in part the dominant rationale for e-government implementation—that it is more efficient and cost effective government, (2) whether such an attitude implies that traditional government therefore cannot be as efficient or cost-effective, (3) beliefs related to whether e-government can be more accountable to citizens than traditional government and (4) is there any consonance between these attitudes and the comments and discussions emerging from the focus group word association exercises?

Question No. 8: The table below lists the potential negative things that may result from e-government. Please indicate how big a concern each one is to you on a scale of one to ten. A "10" means that you are extremely concerned, and a "1" means that you are not concerned at all. You may use any number from 1 to 10.

This question focuses on six areas of potential concern: (1) government employees potential misuse of personal information; (2) government impersonality; (3) hackers; (4) the potential for difficulty in obtaining information; (5) loss of privacy; and (6) inequality of access to public services. The respondent numbers assigned to each of these potential concerns will assist the researcher in validating the respondents' expressed attitudes in questions 4, 5 and 6 and to determine: (a) what values these concerns might reflect (b) whether these attitudes and concerns track with the e-government focus group word association exercise results and (c) if these values mirror or differ from those analyzed in the web site research component.

Question No. 9: Would you favor or oppose e-government as the primary means for obtaining information and services from government?

Government service provision, by and large, still involves the human-to-human interface and traditional public encounter. This is neither good nor bad—it is a reality. Civil and criminal justice services, education, health care provision, policing, social services, transportation services, and so forth, still require some level of human agency to occur. Admittedly, e-government has been phenomenally successful in providing broader citizen access to government information and activities and in the online automation of select routine transactions. However, at the end of the day, the current e-government interface functions primarily as an information resource.

The e-government web site is fast becoming the most prevalent presentation of the face of government in the United States. It is second only perhaps to the television presentations on the major television networks, political talk shows, cable public access channels, and print media. Despite its growing presence, the e-government web site direct service offerings are notably thin and tend to focus on the more routine public encounter or transaction that typically requires no human intervention. Some typical examples are online driver license renewal, tax filing, hunting and fishing license applications.

This Likert scale question contains implicit queries such as (1) what vision of government can be inferred from a strong user preference for e-government as the primary means for obtaining information and services from government, (2) would this be an endorsement solely of the information function of government and (3) how does this preference compare with the comments and suggestions elicited in the focus group word association exercises.

<u>Demographics</u>

Question No. 10: This question captured basic gender and age range data for evaluating the potential effect of gender and or age on e-government attitudes.

In this chapter I have outlined the research methodology used in this exploratory study and discussed the multiple methods used and their relevance to the overall project. The bases for the normative and aesthetic components of the web site analysis were also discussed along with the related criteria, value and aesthetic constructs. I have discussed the previous research and work of other scholars which has informed my research efforts and perhaps most importantly provided me with the theoretical basis for executing this multidisciplinary project.   Chapter IV will explore the data derived from the web site analyses, focus groups, and questionnaire through the expressive, behavioral, and societal lenses and further discuss the questions raised by the foregoing.