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How the Rhetorical Tradition Informs Web Design, Information Architecture and Usability

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Abstract

Many traditional ideas from rhetoric, communication and human factors have been transformed, shifted, and redesigned to form the foundations of information architecture, usability and web design. Some traditional ideas from rhetoric and communication are often hidden or obscured by new metaphors and modern terms used by information architects, information designers, new media content managers, and web site creators. Ancient and traditional rhetorical concepts from Aristotle, Cicero, and other rhetoricians have been transformed by modern communication and marketing communication specialists in the past century and then transformed again by new media designers in the last twenty years. Web design, information architecture, and usability are rooted in traditional rhetorical concepts and in modern communication ideas.

Keywords: Rhetoric, Aristotle, Cicero, Information Architecture, Usability, Web Design, Communication, New Media, IMC

Web design, information architecture, and usability are rhetorical. The goal of a website is to communicate, inform, or persuade. Information architects work on the organization, design, and navigation flows of a website. Usability specialists test websites for ease of use and performance. They determine if the website is effective or useful for different groups of users. The process of web design is similar to constructing a speech. When making a speech, a goal or a thesis is established to appeal to an audience. The speaker develops a thesis, main points and evidence to appeal to particular audiences. The speaker organizes main points and then delivers the speech based on memory, notes, or PowerPoint slides. After a speech is performed or delivered, critics can ask if the speech was effective.

The product itself - a web page, a video clip, a speech or an essay- is rhetorical. The ideas and images are persuasive, instructive, entertaining or shocking. The audience of a speech or of a web page can accept, reject, criticize, applaud, or agree with the message(s). The audience judges a speech or a web page. The web design process, the web site structure, the style sheets, the recall patterns and the performance of a web site recreate the traditional rhetorical canons of invention, organization, style, memory, and delivery.

New media designers, information architects, and usability specialists use, recreate and reformulate many of the traditional theories of classical rhetoric. Many times, the theories of design of the verbal and visual content try to reinvent the same wheel that was used 2,500 years earlier by Greek rhetoricians. At other times, new media designers and theorists are embedded in modern rhetorical theories of presence and identification. At other times, modern theories of communication, mass media or marketing communication like branding, market

segmentation or media production are emphasized in new media. I will compare and contrast the theories and practices of classical and modern rhetoric with the theories and practices of New Media web design and testing. I will examine the relationships between the theories and practices of web designers, information architects, usability experts, and new media theorists with classical rhetoric and modern communication theories. First, I will examine the rhetorical nature of web sites and New Media. Here I will consider the role persuasion and the role of the audience. Second, I will analyze the canons of rhetoric – invention, organization, style, memory and delivery as applied to New Media design and testing.

The Sophists in ancient Greece talked about the parts of *rhētorikē* as *heuresis*, *taxis*, *lexis*, *mneme*, and *hypokrisis*. The *Rhetorica ad Herennium*, the Roman rhetorical text of about 90 B.C., discussed the rhetorical canons of *inventio*, *dispositio*, *elocutio*, *memoria*, and *pronuntiatio (actio)*. Overall, I will demonstrate that classical rhetoric and modern theories of communication are used, embedded and refashioned for the latest concepts of new media. Rhetoric and other humanities express both permanence and change in any human symbolic activity (Burke, 1965). The art of discovery, organizing, and creating verbal and visual content has many consistent forms that have existed for several millennium. Technology and new media offer revolutionary change and create new terminologies, new opportunities, and new constraints for societies. Technology changes but the humanities offer a glimpse at both the permanence and the change of human symbol making.



The Audience

Aristotle defined rhetoric as the art of “discovering in the particular case... the available means of persuasion (1355b p.7).” Rhetoric considers the audience or what “seems probable to a given class (1356b p.11).” The audience for Aristotle ranged from a mere observer to a judge who decides things of the past or of things to come (1358b p.16).

Modern communication under the influence of theories of Kenneth Burke focused on the concept of identification based on perceived interests, common substances of heritage, ideology, or values. Theories of identification became one of the prime motives in marketing communication. Professionals in advertising and marketing examine different market segments, target the needs and interests of their markets (Kotler, 1994) and create brands that address different markets (Aaker, 1996).

In ancient Greece, the audience often had an active role. In the assembly in Athens the male citizens would decide all legislative decisions on issues such as taxes, spending, war, or peace. The average citizen played an important role in the direct democracy employed in Athens. “Political parties did not exist in ancient Athens, and political leaders formed informal circles of friends and followers (Martin, 2000, p.108). Any male citizen could speak, ask questions, or debate issues. Even famous speakers like Demosthenes had occasions when they were “shouted down” by the audience (Kennedy, 1994 p.70). By the fifth century, literacy was common but many, including Plato, criticized written texts as inadequate because they cannot answer questions put to them (p.27) encourages forgetfulness and are “an illegitimate brother of true, oral discourse (p.42)-from end of Phaedrus tale of Theuth). After the reforms of 461 B.C., the jury in Athens was composed of male citizens chosen by lots. Juries “interpreted the law by deciding on their own how it should be applied in each and every case. There were no judges to instruct the jurors. In most cases, citizens brought the charges, and the only government official in court was a magistrate to keep fights from breaking out (Martin, 2000, p.110).” Juries, composed of several hundred male citizens, heard arguments in a single day and then rendered their verdicts based on majority vote.

A speaker would use a variety of proofs (pisteis) to appeal to the audience. For example, emotional proof or pathos was used for “creating a certain disposition in the audience (Rhetoric, 1356a, 1377b). At the beginning of book three, Aristotle states: “for we have seen that persuasion can be effected only (1) by working on the emotions of the audience (pathos), or (2) by giving the audience the right impression of the speaker’s character (ethos), or (3) by convincing them all with proof (logos)(Rhetoric, 1403b).” Aristotle would have the speaker consider the “types of human character in relation to the emotions and moral states, to the several periods of

life and the varieties of fortune...By periods of life are meant youth, the prime of life, and old age; by varieties of fortune are meant health, wealth, power and their opposites (Rhetoric, 1388b).” This audience of male citizens shared a similar language, culture, and polis yet would have some differences based on age, moral character and fortune.

Today, in the web design process, the design team looks at the target audience, user needs, and task analysis. Demographic studies are done to estimate the age, gender, income, education, occupation, and computer experience of the users. This demographic data may come from secondary research supplied by market research firms such as MRI, SRI, Forrester Research or the hundreds of specialized target marketing firms. The data can also be generated by primary research using surveys, focus groups, and other sampling and semantic techniques.

Brink, Gergle and Wood (2002) discuss generating user profiles and surveys to determine demographics for Web sites.

Some of the common ways people vary include

Market segment: Age, gender, education, occupation, hobby, or income

Disabilities: Visual, hearing, movement or cognitive impairments

Experience level: Computing, internet culture, subject domain

These different types of audiences will influence the selection of content and functionality for your site, the way text is worded, the appearance of your site, and the level of simplicity of your design. (p.45)

User needs analysis examines the user goals, business goals and usability goals based on the nature of the task, task time, learning styles, acceptable error rates, and impressions usability and aesthetics (Brink, Gergle and Wood, pp.62-93).

Andrew Chak writes in *Submit Now: Designing Persuasive Web Sites* that “persuading visitors at your web site to do what you want them to do. It’s about compelling users to add items to a shopping cart, fill out an application form, or send you an email. It’s about getting users to click (2003, p.1).” Chak (2003) states that “Clicking is a decision. Every click requires your users to scan a page, move their mouse, and make a decision to click something (p.12).” Chak discusses consumer decision making and the different types of users such as browsers, evaluators, transactors, and customers. Web site designers are encouraged to do demographic and psychographic analyses of the audience and to design their web sites to be persuasive.

B. J. Fogg (2002) goes one step further when he suggests that computers are persuasive social actors.

“When perceived as social actors, computer products can leverage these principles of social influence to motivate and persuade....I propose that

five primary types of social cues cause people to make inferences about social presence in a computing product: physical, psychological, language, social dynamics, and social rules (Fogg, 2002, pp.90-91).”

In sum, in classical rhetoric, one speaker would try to persuade audience members who are often made up of active decision makers as judges, jury members or as citizens. In modern marketing communication, people or companies communicate with multiple targeted markets of active consumers or passive viewers over a mass medium. In new media, web design teams present interactive data to one or many users. Access to the site can be controlled by permissions, security features and passwords. Navigation, use of hyperlinks and scrolling are controlled by active users. User profiles, human factors, log data, and usability analysis help target the Web site to different target markets and even to individual users.

Invention

Invention in the classical period is seen as the creating of ideas or the discovering of topics. For Aristotle, invention consists of three modes of proof: ethos, pathos, and logos. Classical rhetoricians employed a reasonable man standard when determining what arguments would work with their audience. Enthymemes and examples were constructed to give an audience the reasons needed to support the ideas in a speech (McAdon, 2003). Topoi or places of argument were used to help invent the ideas and arguments.

In modern communication studies, invention has been replaced with terms like creation and creativity. Communicators are urged to consider the audience’s identification, needs, and motives to construct appeals that should be adapted and targeted to a specific audience. In public relations and other forms of modern business communication, the credibility of the speaker – trust, identification, dynamic personality, charisma- are used to spin a positive image. The emotional makeup and the perceptions of the audience are important factors in the construction of credibility for a speaker or a company. Different genres of communication can employ different expectations for the use of formality, humor and professionalism.

Web site creators have replaced invention with the metaphors of construction, content and design. Information architects talk of constructing a site, using toolboxes, blueprints, prototypes, wire frames, site maps, diagrams, and content inventories (Wodtke, 2003). Rosenfeld and Morville (1998) talk about identifying content and functional requirements by using wish lists, content inventory forms, brainstorming, metaphor exploration, scenario development, blueprints, mock-ups and design sketches in the web development process. Metaphors of construction, design and human

factors psychology dominate the discussion of creating web sites. Reasonableness and meaning have been ignored in favour of information and use. Ethos remains an important concept for Web site creators (Fredrick, 1999). In new media, additional concepts such as security systems, firewalls and trustworthy certifications have been added to ethos.

Organization

For classical rhetoric, dispositio was the arrangement of a speech into parts. The speaker sequenced ideas and arguments into parts: introduction, narration, partition, refutation, conclusion. The development and arrangement of the ideas in a speech would be influenced by whether the speech was epideictic, forensic or deliberative.

In modern communication theory, disposition has been transformed into discussions of organizational patterns and textual cues. The basic sequence of introduction, body, and conclusion are used frequently by speakers, and writers. The body of the presentation is determined by the media format, the topic and the genre.

The notion that the writer determines the organization of material alone has been replaced with Roland Barthes’ (1975) concept of the pleasure of the text where each reader transforms the sequencing of the text for their own needs and for the enjoyment of each reader.

In web design, information architects focus predominately on the structure and navigation of the web site. Richard Saul Wurman (1996) has defined an information architect as “1) the individual who organizes the patterns inherent in data, making the complex clear. 2) a person who creates the structure or map of information which allows others to find their personal paths to knowledge.”

Jakob Nielsen (1999) and other usability specialists test web sites to determine the ease of use of a website by examining how the user navigates the site, the pathways, the focal points, the labels and the other structures and elements of the web site.

The introduction of traditional speeches has been transformed into portal pages or splash pages. Body sequences have been replaced by the idea that structure is based on patterns, industry categories, programming, and labelling systems.

The notion that the speaker determines the organization has been reformed by the control of the user navigating through interactive content, intelligent agents and personalized pages (Hagen, 1999).

Style

Style in classical rhetoric is known as Elocutio. Aristotle, Quintilian, and Hermogenes presented concepts such as correctness, clarity, appropriateness, decorum, and kairos as elements of

the speakers' style. For Cicero, the grand, middle, and plain style was based on the amount and types of tropes, figures of thought and figures of speech that would be used. For Blair, style was influenced by the use of beauty and the sublime.

In modern communication, style has become constructed based on style guides such as those offered by the MLA or APA. Style is determined by visual design elements, the consistent branding of IMC, by cognitive metaphors (Lakoff & Johnson) and by the latest developments in fashion and aesthetics.

In web design, style is now based on the use of style sheets (Farkas and Farkas, 2000). A web site has a good style if it has consistency, ease of use, or won an award as a cool site or is a top site based on search engine rankings. Ho has said that the best sites can be categorized as timely, custom, logistic, or sensational. The visual elements of design, color, and images often seem to have more impact on the audience than verbal style.

Memory

Memoria in classical rhetoric was based on places or loci in the mind of the speaker. Commonplaces were linked to images to help the speaker remember topics in a speech (Hutton, 1997). Ad Herennium calls memoria a "treasury of things invented" that would be used by the speaker. These memory devices or topics became the Clavis Universalis or the universal key to secret knowledge

(Yates, 1966 and Rossi, 2000).

Memory in modern communication has been influenced by psychological notions like cognitive categories, perception, long-term and short-term schemas, and brain chemistry (Bolhuis). Visualization, cultural memory, and learning styles are now seen as helping the speaker and the audience understand and recall the message (Eveland, 2004).

For new media, memory is now discussed within the framework of storage or memory chip, labelling strategies, search and navigation systems and image maps. Storage has become the focus of memory in the computer age. Miniaturization of memory devices is seen with smaller chips and memory sticks. Memory for the web site user is aided by search engines, the marking of favourites, and the use of keywords. New media formats and databases now allow the search for music and images.

Delivery

In traditional rhetoric, delivery was known as Actio. Verbal aspects of delivery were emphasized such as pronunciation, volume and rate of speaking.

In modern communication, a conversational or natural style of verbal and nonverbal delivery is considered the best style in most communication situations.

For Web sites, delivery has been transformed into performance. The main consideration is the speed or rate of the communication or download time. Performance, and often payment, is measured by the completion of deliverables.

Usability professionals can measure error rates, times to perform a task, ease of use, and download speed to determine the usability of a web site.

Conclusion

Web design, information architecture, and computing itself can be rhetorical or persuasive. Each appeals to an audience or group of users. Traditional rhetoric and modern concepts from communication and marketing communication are frequently employed in web design. Web designers, site developers, information architects, and usability professionals want to create websites that use the best ideas from user-centered design.

Organization and performance are focused on the most in the web design, information architecture and usability tests. Organization easily can be measured by number of clicks and page flow. Performance can be measured by speed, error rates, or task completion.

The terminology of invention, creativity, and argument has been converted to construction, development and content. The web construction process still uses persuasive appeals especially focusing on trust and the structure of content. Reasonableness and meaning often are neglected in web design. Delivery and memory have focused on the mechanical formats of storage and speed.

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Dr. Gloria Boone is a Professor of Communication at Suffolk University in Boston, Massachusetts. She teaches classes in Rhetoric, Information Architecture, Usability, Web Design, and Advertising. She has published on Communicative Informatics in the 2003 *Proceeding of the Informing Science + IT Education*. She has presented academic papers and consulted with businesses and health care organizations on information architecture, usability, communication and IMC. As a classically trained rhetorician, she believes that the arts and the humanities inform "new" developments in web design, technology, and communication.