Homogeneity and Heterogeneity in Cyberspace

A Comparison of Browsing Preference of Global Web-audience with Common Cultural Heritage

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Abstract
The World Wide Web has been the greatest single influence that impacts on the behavior and lifestyle of the current generation. With an estimated 1.7 billion Internet users worldwide (as at end of 2009), an important question to ask is whether global participation in the cyberspace has resulted in a more uniform global audience or a more diverse one encouraging regional and local culture to freely express itself. This study examined top 100 websites from five different regions to determine the extent of localization and globalization influences on Websites audience’s browsing preference.

Objective
• To determine whether globalization influence of the internet results in similarity in web browsing behavior.
• To determine whether local culture and regional norms result in differences in Web browsing behavior.
• To determine whether Web audiences sharing common cultural heritage also exhibit more similar Web browsing behavior.

Hypothesis
H1: Globalization influence will result in similar rankings among the different lists of top 100 most popular websites.
H2: Web audiences from different regions will show unique preference in their top 100 websites.
H3: Regions with closer characteristics will show more common rankings for their top 100 websites than others.

Methodology
Ranking data were collected in September 2009 for the top 100 websites from five regions which share common cultural heritage: China (PRC), Taiwan, Hong Kong, Singapore, and Macao.

The source of our data was from the well-know Web traffic provider: www.alexa.com

To analyze audience browsing behavior, we classified website content into nine categories as shown in this table:

<table>
<thead>
<tr>
<th>CONTENT CATEGORIES FOR TOP WEBSITES</th>
</tr>
</thead>
<tbody>
<tr>
<td>CATEGORY EXPLANATION EXAMPLES</td>
</tr>
<tr>
<td>Shopping Facilitate buy and sell of goods and services</td>
</tr>
<tr>
<td>Knowledge Provide knowledge content, scholarly papers &amp; encyclopedia</td>
</tr>
<tr>
<td>Pleasure, recreation, or relaxation to the audience, who may actively or passively participate with others</td>
</tr>
<tr>
<td>Membership communality and differences—The extent to which the lists of the top 100 websites are the same or are different.</td>
</tr>
<tr>
<td>Comparison of rank distributions—The degree to which popular websites one region is also popular in another region.</td>
</tr>
</tbody>
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Selected Results
We present three diagrams to show:

• Membership communality and differences—The extent to which the lists of the top 100 websites are the same or are different.
• Comparison of rank distributions—The degree to which popular websites one region is also popular in another region.
• Website content preference analysis—The differences in content preference for Web users from different regions.

Rank Distribution Relationship (Top 25 websites):
These 4 graphs show the “pair-wise” ranking plots for the top 25 websites among the 5 regions. Surprisingly, the CN-MO graph shows negative correlation in that the more popular sites in China were less popular in Macao. The remaining 3 graphs show positive correlation in that the more popular sites in China were less popular in Macao. The remaining 3 graphs show positive correlation, with Hong Kong and Macao exhibiting the strongest correlation.

Preference Based on Category:
The polar plot shows the “content” categories of the top-100 websites from different regions. Portal sites dominate in Singapore, while social networking sites are most popular in Hong Kong and Macao (presumably the influence from the Western world), while corporation sites dominate in Singapore.

Conclusion
• Among the top 100 website lists from the 5 regions, globalization influence produces a collection of websites that common to all 5 regions.
• Culture has a significant effect on a region’s audience website browsing preference, resulting in list of websites unique to each region.
• Regions with similar culture reflect similar audience website browsing behavior.