

DIVERSITY OF THOUGHT IN THE BLOGOSPHERE AND ITS IMPLICATIONS FOR GAINING BRAND IMAGE INSIGHTS

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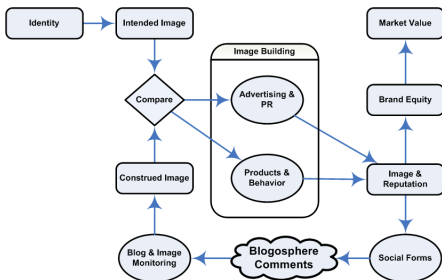
The Problem

- Companies have an image they want to convey but don't know whether the consumer buys into it.
- Companies have started monitoring the blogosphere to infer the image in the consumer's mind
- **Does the blogosphere truly reflect the image in the overall market?**

What are blogs?

Wikipedia (an online encyclopedia based on collaborative knowledge creation) defines a *blog*, a shortened form of *weblog*, as a website where an author shares thoughts in *posts* or *entries*. Most blogs permit readers to add comments to posts and thereby be a conversational mechanism. Popular blogs have become meeting places for communities of readers.

The Blog Feedback Cycle



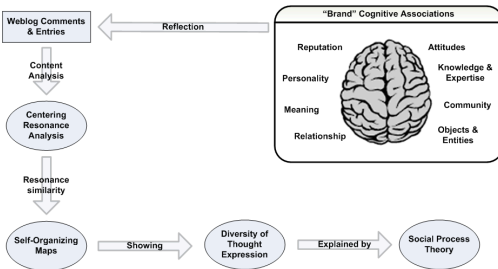
Research Questions

- This study's broad focus is on investigating how common social processes mediate consumers' expression of brand image and what impact they have on the blogosphere's ability to present an accurate representation of brand image.
- In order to address this issue, the following research questions are investigated:
 1. What process mechanisms explain if and when individuals express their thoughts in a blog?
 2. What processes expand cognitive diversity, the expression of diverse thought?
 3. What processes limit cognitive diversity?
 4. What is the relative importance of each of these processes?

Contribution

- **Theoretical contribution:** Provide insight into how individuals reveal their cognitive associations in groups, particularly online communities.
- **Methodological contribution:** A novel integration of centering resonance analysis with a method for modeling the dynamics of loosely coupled moving bodies adopted from mechanical engineering.
- **Empirical contribution:** A demonstration of the extent to which social process theory explains the expression of thought in blog communities for the purpose of enhancing our understanding of the capabilities and limitations of using blogs as a source of brand image insight.

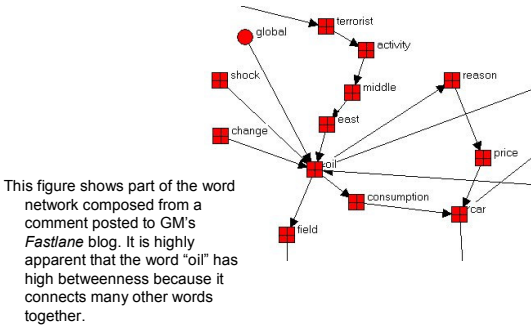
Theoretical Base



Centering Resonance Analysis (CRA)

- CRA is a method of content analysis proposed by Corman et al [1] that turns a body of text into a network of nouns and adjectives.
- The words that have the most effect in giving the text coherence are then found by finding the words with the highest *betweenness centrality*, or simply *betweenness*. These are words that are important because they connect other words together.

Sample Word Network



Influence and Resonance

- Corman et al postulate that these word networks provide insights into the way knowledge is structured in the mind of the writer. The words with high betweenness represent the most salient cognitive associations.
- A quantitative measure of a word's betweenness is called its *influence*.
- Two separate bodies of text can be compared on the basis of commonalities in the influence of the same words used. A quantitative measure of this similarity is called *resonance*.

Self-Organizing Maps

- Kamada and Kawai [2] devised a widely used algorithm for self-assembling data clusters. Their algorithm models each data point as connected to every other data point by a spring tensioned according to some measure of similarity (such as CRA resonance).
- Through an iterative mechanism, similar data points will be pulled together as dissimilar ones are pushed apart until an equilibrium configuration is attained. Once the blog entries and comments have self-organized into stable positions within multi-dimensional space it is possible to detect what *thematic clusters* are present.

Social Process Theory

- Simmel [3] introduced the idea that all social phenomena are the collective result of transactions between individuals. He observed that there is no universal law or force compelling any social act from the top down, it is solely created from the bottom up by individuals acting under their own volition.
- Cederman [4] sees Simmel as the progenitor of the *science of complexity*, the search for simple rules (also called *generative rules*) that underlie complex phenomena.

Complexity Science

“Traditional science seeks direct causal relations between elements in the universe whereas complexity theory drops down a level to explain the rules that govern the interactions between lower-order elements that in aggregate create emergent properties in higher-level systems.” [5]

- Cederman builds on this concept in defining *social process theory*:
“The sociological process approach starts with an observed social phenomenon, whether unique or ubiquitous, and then postulates a process constituted by the operation of mechanisms that together generate the phenomenon in question.”
- The processes that operate together to generate a phenomenon are often called *social forms*.

Blogs as Arenas for Complexity

The blog is a prime example of an arena dominated by the dynamic of complexity: the blog author can post content but cannot compel response. Readers are moved to respond in a manner reflecting the diversity of ways they interpret the blog entry, possibly inspiring a cascade of response from more readers in a cycle that repeats until the readers are exhausted.

The Six Processes Studied

- Cultural Tribalism
- Flocking
- Memetic “mind virus” propagation:
 - Indoctrination
 - Mass dissemination
- Sensemaking
- Reciprocity

Cultural Tribalism

“Blogging can fool you. You may think you are conversing with the world, when it’s just a few people talking frequently, back and forth to each other, creating the illusion of amplification. The echo chamber can deceive a business into thinking it is either more widely successful or further off the mark than it is in reality, because a few people are making a lot of noise.” [6]

“... communities based upon interests and not localities might well reduce diversity and narrow spheres of influence, as like will only be communicating with like. As such, rather than providing a better alternative to real-world communities cyberspace leads to dysfunctional on-line communities ... “ [7]

Flocking

- Reynolds [8] proposed *flocking theory* as a computational model that explains how the coordinated movement of a group can emerge from individuals making decisions based on personal information.
- Rosen [9] proposed that flocking theory was a good explanation for self-organization in human social systems. He proposed that communication was the mechanism of cohesion in human society where a social network of individuals shares access to a collective body of knowledge that acts as a “roadmap” for coordinated action with little centralized control.

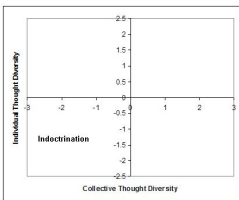
Memetics

- Marsden [10] called memetics the study of “mind viruses”, ideas that are highly contagious and quickly spread through a population.
- Through memes, humanity passes certain cultural practices from generation to generation because these practices increase survivability.
- Dawkins [11] describes two strategies that have evolved to maximize the success of meme propagation: *intense indoctrination* and *mass dissemination*.

Indoctrination & Dissemination

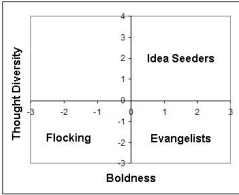
- During **intense indoctrination**, the target person or population is subjected to a high repetition of the meme idea in an attempt to overwhelm thresholds of resistance. This can only happen when the blog is dedicated to the idea.
- In **mass dissemination**, the targets are the people with the lowest barriers to adoption, so the idea is spread as widely as possible to increase the probability of reaching people with a low threshold of resistance. *Evangelists* are the agents of mass dissemination.

Indoctrination Blogs



- Some blogs have evolved as platforms for the expression of a narrow range of ideas.
- Group acceptance demands conformity.

Commenter Types



- **Idea Seeders:** prolific, uninhibited flock leaders.
- **Evangelists:** prolific, but narrow in thematic variety.
- **Flock:** Consistent, but conscious of group acceptance.

Sensemaking

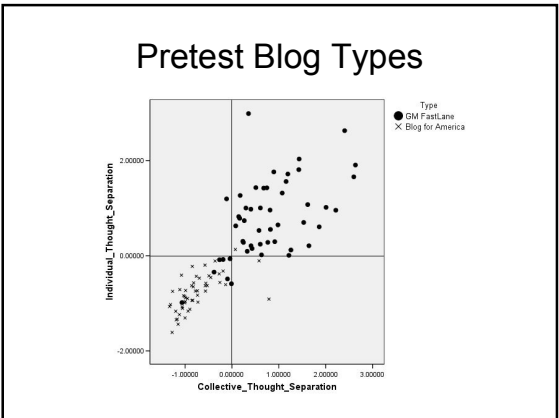
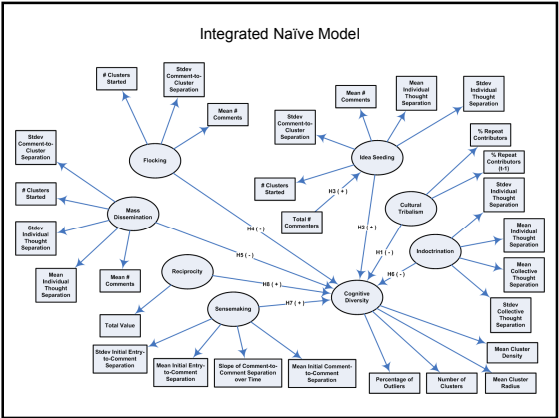
- Sensemaking is a social process whereby individuals collaborate to form coherent thought structures about a newly encountered entity or concept.
- Sensemaking participants should gravitate toward blogging because it allows them to converse more directly, and thus resolve cognitive imbalance with greater efficiency.

Reciprocity

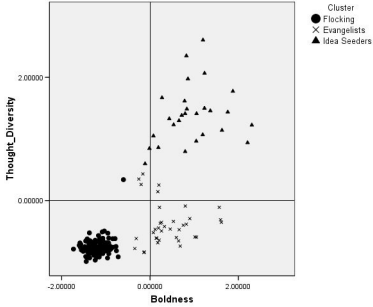
- A blog is a *public good*, depending on the participation of a community for value, but not diminished in value by the number of readers. In a blog, the author posts (a costly effort) in anticipation of response (a payoff), there is always uncertainty about the amount of response the author will receive from any post in return for his cost of posting. This is an example of a trust-reciprocity scenario.

Blog Game Theory

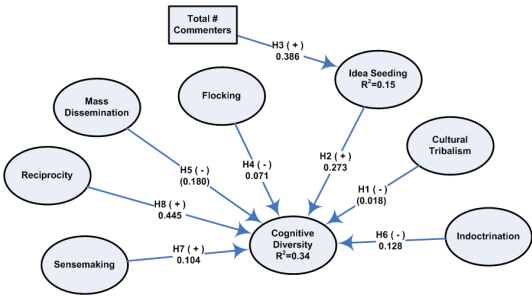
- Since the unique feature of a blog is that a single author controls the discussion, each blog entry is like a sequential game where the author moves first.
- The author's original post plus the cascade of member contributions will continue to raise the value received by the community, increasing the level of obligation felt by those that have not contributed, inspiring more contribution as thresholds of tolerance for withheld reciprocation (i.e. cost of reciprocation) are exceeded. Some community members may have very high levels of tolerance or costs of reciprocation and be *free riders* in any specific game.



Pretest Commenter Types



Pretest Fit



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