How to grow communities
- An analysis of ideas regarding different types of communities, users, and models.

From Juliane Schäl

- Seminar work ‘Introduction to Web Science‘ -
Overview

1. Introduction
2. What types of communities exist?
3. What kind of users are active?
4. How to research on user behavior?
5. How to keep people?
Introduction
Introduction
Introduction
Introduction

Great influence for customers and producers
What types of communities exist?
What types of communities exist?

- Media
- Communication
- E-government
What types of communities exist?

- E-commerce
- Social Media
- Boards & Forums
What types of communities exist?

**Regularly**
- Media, Social Media, Communication

**Commonly**
- E-commerce, Boards & Forums

**Occasionally**
- E-government, Boards & Forums
What kind of users are active?
Social role:

„*A behavioral repertoire characteristics of a person or a position.*“

„*Rights and duties attached to a given status.*“

Bettencourt & Sheldon (2001)

Goffman (1959)

What kind of users are active?

**formal**

- Behavioral characteristics are a result of the role
- e.g. President, police officer

**informal**

- Role is recognized because of previous behavior
- e.g. plan-makers
What kind of users are active?

The celebrity

- Prototypical central figure
- Active posters
- Spending a lot of time & energy contributing
- Everyone knows them

![Top 20 Posters in alt.computer.consultants by message count, during our observation.](image)

Golder & Donath (2004)
What kind of users are active?

The newbie

- Most widely-recognized
- Lack of communicative competence and common ground
- Advised to lurk
- Most prevalent behavior: Asking

The lurker

- Reads, but does not participate
- Difficult to study: invisible
- Several reasons for not actively participating
What kind of users are active?

**The flamer**
- Known for being aggressive and controversial
- Moving between communities, not part of a group

**The troll**
- Identity deception
- Disturbs communication
- Bad influence on how the group feels on newbies (mistrust)

**The ranter**
- Frequent poster
- Similarities to the celebrity
How to research on user behavior?
How to research on user behavior?

• Boards.ie data set
• Largest general topic discussion board in Ireland
• In 2009:
  ▫ 596 forums
  ▫ 244850 threads
  ▫ 75400 users
  ▫ Over 4.3 million posts
• Model of interaction as a weighted, directed graph
• Analysis of 20 forums from the period 07/2006 to 12/2006

Chan & Hayes (2010)
How to research on user behavior?

**Structural features**

- Indication of communication between users
- Users can be characterised by the interactions of their neighbours
- Ego-centric network of each user

**Reciprocity features**

- Percentage of neighbours of a user with in and out edges
- Percentage of threads with reciprocal communication
Persistence features

• Length of conversations
• Mean and standard deviation of posts per thread

Popularity features

• Measure how popular a user is: The more popular, the more replies

Initialisation features

• Percentage of threads initiated by a user
• Percentage of threads with at least one reply
• Excluded due to too high scores
How to research on user behavior?

<table>
<thead>
<tr>
<th>Name</th>
<th>Clusters</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Joining Conversationalists</td>
<td>1, 2</td>
<td>No initialisation. High levels of communications with a relatively small set of users.</td>
</tr>
<tr>
<td>Popular Initiators</td>
<td>3, 13</td>
<td>Very high levels of thread initialisation, coupled with relatively high popularity (high in-deg %).</td>
</tr>
<tr>
<td>Taciturns</td>
<td>5, 6</td>
<td>Very low reciprocity, volume of communication and few neighbours suggest limited conversation with a few users. The main difference between clusters 5 and 6 is their exponents, suggesting they communicate with different types of neighbours.</td>
</tr>
<tr>
<td>Supporters</td>
<td>4, 7</td>
<td>Relatively middle of the road statistics, suggesting the users form the backbone of the forums. Difference between clusters 4 and 7 is the amount of communications.</td>
</tr>
<tr>
<td>Elitists</td>
<td>9</td>
<td>Characterised by very low percentage of neighbours with bi-directional communications but high percentage for bi-directional threads. Combined with low in-deg percentage, these users prefer to carry on conversation with a very small set of users.</td>
</tr>
<tr>
<td>Popular Participants</td>
<td>8, 12, 14</td>
<td>Do not initiate much threads, unlike the popular initiators, but are involved with a large percentage of users on forums. They can be considered a cross between joining conversationalist and popular initiators. The difference between clusters 8 and 12 is the volume of communications.</td>
</tr>
<tr>
<td>Grunts</td>
<td>10, 11</td>
<td>Low volumes of communications to a few users. Different from taciturns by the relatively higher levels of reciprocity.</td>
</tr>
<tr>
<td>Ignored</td>
<td>15</td>
<td>Very low percentage of posts get replied to</td>
</tr>
</tbody>
</table>

Table 3: Summary of the common user roles.
How to research on user behavior?
How to research on user behavior?

Figure 2: The user role composition of the 20 forums.
How to keep people?
How to keep people?

**Keep**
- Keep track of activities
- Advertisement
- Innovations

**Balance**
- Do not panic
- Support established users
- Traditional concept
Thank you for your attention!
Sources

Sources

- Lars Backstrom, Ravi Kumar, Cameron Marlow, Jasmine Novak, and Andrew Tomkins. Preferential behavior in online groups. In Proc. Int. Conf. on Web Search and Web Data Mining (WSDM), New York, NY, USA, 2008
- Scott A. Golder and Judith Donath. Social roles in electronic communities. In in Association of Internet Researchers (AoIR) 5.0, 2004