To Share or Not to Share: An Affordances Based Modeling of Social Media Usage For Posting Content
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Motivation

Continually increasing number of Social Network Sites (SNSs)

People now use multiple SNSs instead of just one

Problem!
Additional cognitive effort needed to select ideal SNSs for posting content

Solution!
Intelligent Content Router

What’s Needed?
A model that explains multiple SNS usage

Methods

Usage is inherently tied to the perceived utilities—affordances—provided by site features. Therefore, we test whether affordances can be the model that explains multiple SNS usage.

Benefits of a multi-SNS usage model:
- Intelligent Content Routing
- Better understanding of platform-agnostic SNS characteristics, such as tie strength, interpersonal relationships, norms, privacy management

Our Survey (N=674):

Part 1
1. Which of the following media would you use to post something to your social network(s) for this scenario?
   - Text
   - Image
   - Video
   - Link
   - Other (Please Specify)
   - I would not post anything for this scenario

2. What would be the ideal audience size with whom you would share the post?
   - Small
   - Medium
   - Large
   - I would not post anything for this scenario

3. How are you connected with the people with whom you would share the post?
   - Friends that you knew in person first
   - Family
   - Professional Connections
   - People you met online
   - People you don’t know at all
   - Other (Please Specify)
   - I would not post anything for this scenario

Part 2 (same questions asked for each SNS people used)

4. How would you select the people with whom you would share the post?
   - Would you select:
     - Specific individuals relevant for this scenario
     - A predefined list of people from your social network
     - Everyone in your social network
     - Public
     - Other (Please Specify)
     - I would not post anything for this scenario

5. Would you post the post to automatically disappear from your page after a certain amount of time?
   - Yes
   - No, but this is something I might delete on my own after some time
   - No, I would be okay with this being available permanently
   - Other (Please Specify)
   - I would not post anything for this scenario

Results

Matching Model: selects ideal SNSs for posting based on a binary match between
- desired affordances for a post
- anticipated affordances present in the SNSs used by an individual

Machine Learning Model: selects ideal SNSs using an SVM classifier, given the same affordance input as the Matching Model

<table>
<thead>
<tr>
<th></th>
<th>Random Baseline</th>
<th>Matching Model</th>
<th>Machine Learning Model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Avg Precision</td>
<td>55.13</td>
<td>79.09</td>
<td>82.66</td>
</tr>
<tr>
<td>Avg Recall</td>
<td>77.67</td>
<td>47.34</td>
<td>35.18</td>
</tr>
<tr>
<td>Avg F1 Score</td>
<td>76.47</td>
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</tbody>
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Human vs. Automated Routing

Human uses

uses

... wants to share a travel picture and a news article

Habitual Use

usually posts on

Travel Picture + News Article posted on:

Using Content Router

you should post...

Travel Picture on:  "Travel Article on:  "

Part 1