Tweets and Sales

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Microblogging websites gained significant popularity

- Leading examples
  - Twitter in the US
  - Weibo in China

- Central features
  - Tweet: disseminate short posts
  - Retweet: forward other users’ tweets
  - Follow: subscribe to other users’ tweets

- High traffic on microblogging websites
  - Twitter users post 340 million tweets a day
  - Weibo users post 130 million tweets a day
Businesses resort to tweeting as a marketing tool

- Fortune 500 companies
  - 73% on Twitter
  - 29% on Weibo

- Small businesses
  - Over 4,500,000 on Twitter
  - Over 130,000 on Weibo
Open question:

Does tweeting help company grow sales?
Field Experiment

We run a field experiment on Weibo

- To identify the causal impact, we randomize
  - Company tweets of its own product
  - User retweets of company tweets
Owned by Sina Corporation
Launched in August 2009
Current Alexa ranking 17

<table>
<thead>
<tr>
<th></th>
<th>Weibo</th>
<th>Twitter</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total registered users</td>
<td>Over 500 million</td>
<td>Over 500 million</td>
</tr>
<tr>
<td>Growth of registered users in 2012</td>
<td>Over 150 million</td>
<td>Over 100 million</td>
</tr>
<tr>
<td>Monthly active users</td>
<td>46 million</td>
<td>200 million</td>
</tr>
<tr>
<td>Growth of active users in 2012</td>
<td>16 million</td>
<td>60 million</td>
</tr>
</tbody>
</table>
We collaborate with a TV company

- A major global media company that produces documentary TV shows
  - Mainly aired on 7 local TV channels (Shanghai, Guangdong, Tianjin, Hangzhou, Wuhan, Fuzhou, Chongqing)
  - One show each day; same show for all channels

- Company presence on Weibo
  - Weibo account created in October 2010
  - 125,056 followers, 208 followees, 2,268 tweets right before the experiment
  - One “show tweet” and several other tweets each day
Field Experiment

Primary experiment design

- 98 shows are randomly assigned into three conditions

<table>
<thead>
<tr>
<th>Experimental condition</th>
<th>Number of TV shows</th>
</tr>
</thead>
<tbody>
<tr>
<td>Control (no tweets or retweets)</td>
<td>14</td>
</tr>
<tr>
<td>Company tweet</td>
<td>42</td>
</tr>
<tr>
<td>Company tweet &amp; user retweet</td>
<td>42</td>
</tr>
</tbody>
</table>

- Company tweets at 11:00 am
- User retweets company tweets at noon
- Shows are broadcast after both treatments on 5 channels and before the treatment on 2 channels
9 May 8, 2014

Company tweets

呼呼十一月大片预告片初剪，一次鲨鱼攻击永远改变了六个人的人生。但当他们发现有关鲨鱼的惊人真相时，每年都要有七千三百万条鲨鱼被捕，有些鲨鱼和白鲨可能会在几十年后消失。这些鲨鱼攻击的受害者竟然团结起来以拯救这些差点杀了他们的美丽动物。

《守护鲨鱼》今日播出（11月6日）
[Introduction of the show]. [Show title] is going to be broadcast today [Month/Day].
Company tweets

Field Experiment
Company tweets

Broadcast info of 3 TV channels
“流言终结者”亚当和杰米又回来了！猜猜这两个老顽童这次又在发明什么机器？大家千万别错过今天的电视节目！

#探索十月大片预告#变身裁判的“流言终结者”亚当和杰米邀请一队火箭科学家和一群特效美术师参加比赛——打造一台以“冰与火”为主题的多工步机器。最后，他们将选出最富创新和创意的一台机器。《连锁反应大比拼：第1集》（10月6日）

2012-10-5 22:59 来自博圣云峰发布管理

2012-10-6 00:16 来自新浪微博
Text:
[Personal description of the show].
Don’t miss the show today. /Check out this show today…
Field Experiment

User retweets

Retweet of company tweet
We recruit Weibo influentials to retweet

- Weibo influential
  - Has many followers
  - Tweets actively
  - Retweeted actively by followers

- We recruited 42 Weibo influentials to retweet the show tweets
  - A total cost of 6,790 USD
  - Different influentials retweet different shows
Raw effect on TV viewing

- Variable: % of audiences who watched a given show

![Bar chart showing the raw effect on TV viewing. The x-axis represents different conditions, and the y-axis shows the % TV Viewing. The chart indicates a control group with a value of 0.075.](chart.png)
Raw effect on TV viewing

- Variable: % of audiences who watched a given show

![Bar chart showing the raw effect on TV viewing.](chart)

- Control: 0.075
- Tweet: 0.133
- Tweet & Retweet: 0.157
Results

Tweets and retweets both increased TV viewing

- Focusing on shows aired after (re)tweeting
- TV viewing increased significantly in both treatment conditions
- This remains true after controlling for the effects of
  - Other tweets by the company
  - TV channel
  - Week
  - Day of the week
  - Show genre
  - Show type (series or not)
  - Show episode
Results

Tweets and retweets both increased TV viewing

- Focusing on shows aired before (re)tweeting
- TV viewing did not change significantly in either treatment condition
- This remains true after controlling for the effects of
  - Other tweets by the company
  - TV channel
  - Week
  - Day of the week
  - Show Genre
  - Show type (series or not)
  - Show episode
Does displaying broadcast information matter?

- Finding: Displaying broadcast information
  - Did not affect TV viewing in the Tweet condition
  - Increased TV viewing in the Tweet & Retweet condition

- Interpretation
  - Informative advertising enhances product adoption among new customers mainly
Results

Does the number of company followers matter?

- Finding
  - Cumulative company following did not moderate the effect of company tweets
  - Incremental company following earned on the day before the TV show amplified the effect of company tweets if the tweets contain broadcast information

- Interpretation
  - Again, informative advertising enhances product adoption among new customers mainly
Results

What affects company following?

- Show popularity had no effect
- Company tweets about the show had no effect
- Company’s other tweets increased company following
- Influential retweets increased company following – remarkably
  - Most effective influentials: those who have more followers and are retweeted more actively
  - Least effective influentials: those who tweet more actively
Results

Effect magnitude

- Company tweets increased TV viewing by 77%
- Influential retweets increased TV viewing by another 19%
  - 32% if the company tweet was informative
- Influential retweets increased company following by 51%
  - Which then increased next-day TV viewing by 15%
Takeaways

- Encouraging news
  - Tweets can improve the bottom line

- Actionable recommendations
  - Tweet about your own product
  - Hire influential users to retweet
    - Help new customers buy

- Revenue model for microblogging platforms
  - Charge a fee for business accounts?