

The Social Media Landscape

Social Media and Web Analytics

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Learning Goals

- Explain the growth in Social Media & its' importance for marketing
- Understand the breadth of the terms "Social Media" and "User Generated Content"
- Conceptualise why people contribute to social media
- Explain the definition of a "lurker" & analyse their marketing value

Social Media Landscape

Social Media Matters!

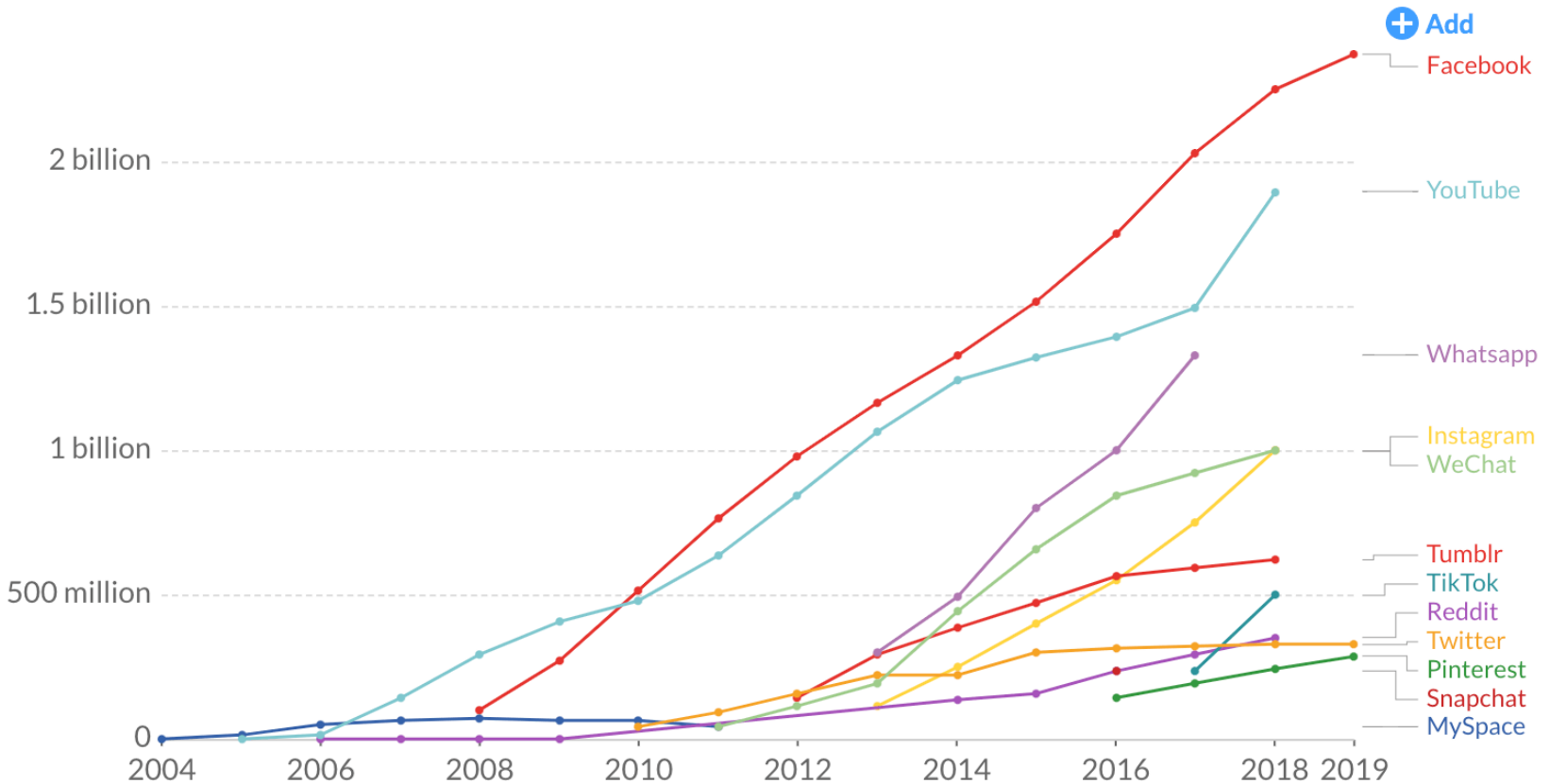
Massive growth in social media use over the last two decades

- 2005: 9% of Internet users aged 18-29 used social media (Aral, 2020)
- 2021: 53.6 % of the *world's population* uses social media (Hootsuite, 2021)
 - That's 4.2 billion people!
 - Average daily usage is approx. 2 and a half hours

Social Network Popularity Over Time

Number of people using social media platforms

Estimates correspond to monthly active users (MAUs). Facebook, for example, measures MAUs as users that have logged in during the past 30 days. See source for more details.



Source: Statista and TNW (2019)

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Social Media Informs Purchasing

THE SOCIAL PATH TO PURCHASE

% who say they do the following applies to them

● Global ● 16-24 ● 25-34 ● 35-44 ● 45-54 ● 55-64

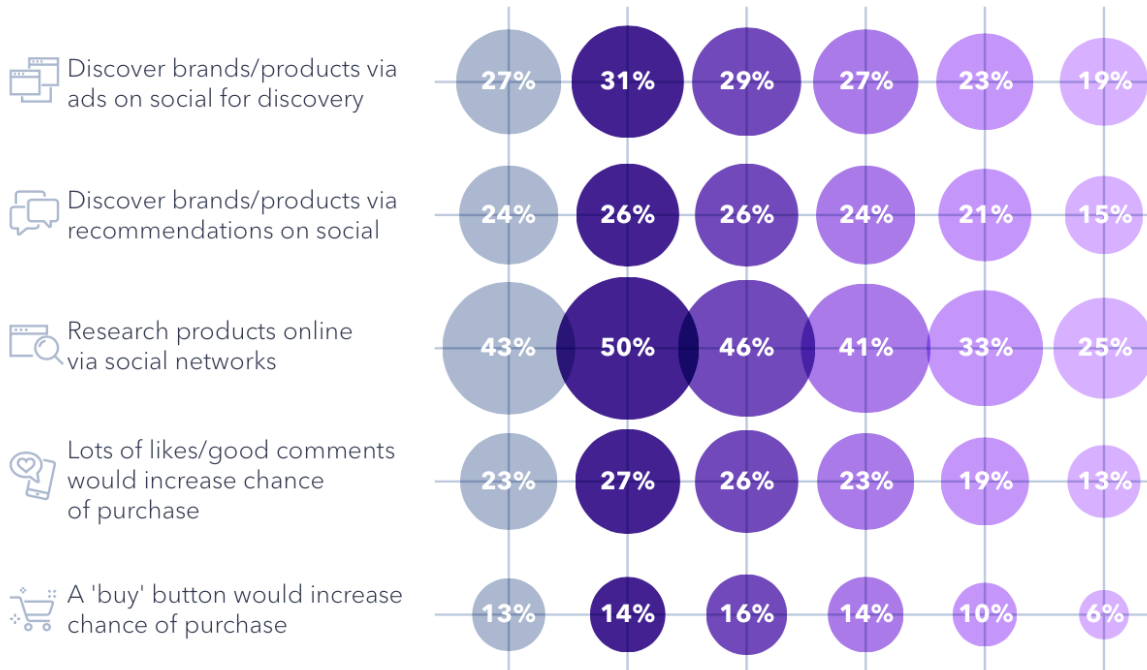


Image Source: Global Web Index, 2021 "Social media marketing trends in 2021"

Some Useful Definitions

User Generated Content: Content that is generated or created by an internet user who is a consumer of this information or content

Social Media: The online platforms that host this content

- Think of these as the working definitions for our course
- People have a tendency to be use these terms relatively interchangeably
 - (include me as one of the "people")

Diversity of Social Media Platforms

Previous definitions means **many platforms** fit in our scope:

Table 12.2 Popular user-generated content platforms

Types of user-generated content	Prominent platforms
Pictures	Instagram, Pinterest, Snapchat, Flickr
Personal updates and networking	Twitter, FourSquare, Facebook, LinkedIn
Reviews for products and services	Yelp, Rotten Tomatoes, ZocDoc, Amazon
Encyclopedia and reference sites	Wikipedia, Wikia
Videos	YouTube, Vine
Comments on news articles	NY Times Online, WSJ Online
Crowdfunding	Crowdrise, Kickstarter, IndieGoGo
Sharing platforms	Uber, Airbnb, Couchsurfing
Social payments	Venmo, Square
Discussion/question and answer	Reddit, Quora, StackOverflow
Blogs	Tumblr, WordPress

Including ones we might not have traditionally view as 'social media' from our day-to-day notions

Table Source: Luca, M, 2015, "*User Generated Content and Social Media*", in Anderson, Waldfogel & Stromberg (eds), 2015, "*Handbook of Media Economics*"

Why Did Social Media Take off?

Three factors:

- **Digital Social Networks**

- Structured information flow

- **Machine Intelligence**

- Recommendations of friends and content over the network

- **Smartphones**

- "Always on"
- Feeds our social brain

Aral's "Hype Machine"

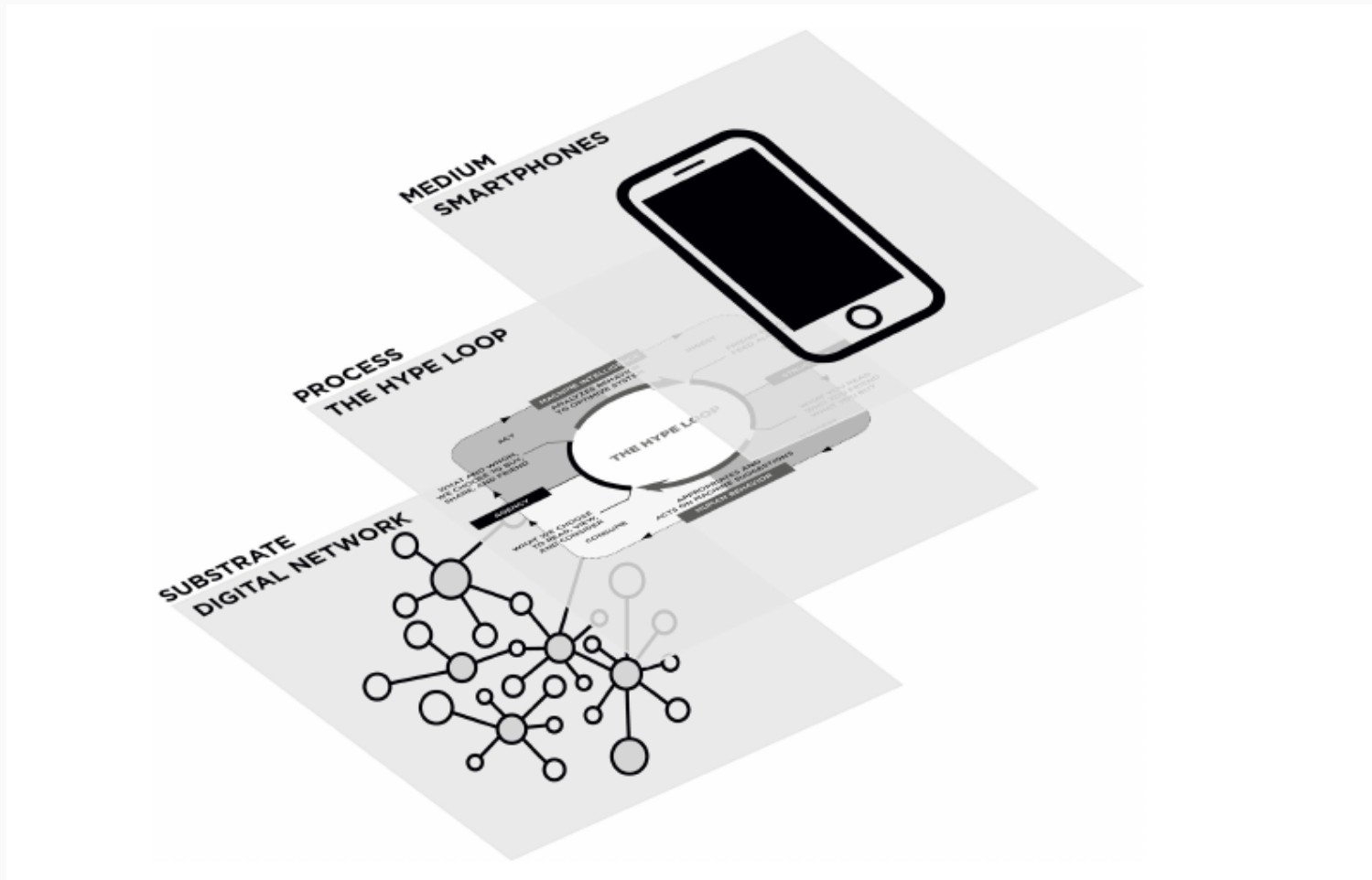


Image Source: Aral, 2020, [The Hype Machine](#), Figure 3.3

Aside: Dark Side of Social Media

Rise of social media is not all positive

- Mental health effects
- Echo chambers due to self selection into content and recommender systems
 - Political Polarisation
- Privacy concerns

If you're interested in more on this:

- Allcott et al (2020) "[Welfare Effects of Social Media](#)", American Economic Review
- ... and papers cited by it + citing it

Why people contribute to social media

Intrinsic vs Image Related Utility

Why does a user want an audience? Toubia & Stephan (2013)

1. **Intrinsic Utility:** inherent satisfaction

- Prediction: exogenous increase # of followers → more posts
- Why? Broadcasting to more people

2. **Image-related Utility:** motivated by perceptions of others

- Prediction: exogenous increase # # of followers → no change / decrease in posting behaviour
- Why? Having followers is 'enough', post content to attract new followers

Research Question: Can we disentangle these components?

Field Experiment

Platform: Twitter

- Approx 2,500 non-commercial accounts via Twitter API

Step 1: "Watch" them for 52 days, see if active

- Active: more tweets, or followed more people
- 1,355 are active

Step 2: Gradually add new 100 followers to 100 of the accounts ("the treatment group")

- "New followers?": "synthetic" accounts designed to look realistic
- "treatment group": 100 of the 1,355 accounts selected at random

Step 3: Watch what happens

- Monitor whether posting intensity increases or decreases as followers are added

Step 4: Analyse the data

Main Findings (Model Free Evidence)

Finding 1: No main effect on posting activity

- Control Group: 34.19 % of users had greater posting rate after intervention started
- Treatment Group: 40.82% of users had greater posting rate after intervention started
- 6 percentage point difference not statistically significant

Finding 2: Differential effect based on # follower started with

Table 4 Proportion of Users with Increased/Decreased Average Daily Posting Rate (After vs. Before Intervention)

Quintile	Increased average daily posting rate		Decreased average daily posting rate	
	Treated	Control	Treated	Control
1	0.286	0.205	0.238	0.185
2	0.632	0.350	0.158	0.370
3	0.556	0.370	0.278	0.426
4	0.200	0.451	0.700	0.474
5	0.400	0.375	0.500	0.574

Notes. Treated users in the second quintile were significantly more likely to increase their posting rates compared with users in the control group ($z = 2.42$, $p < 0.02$) and marginally significantly less likely to decrease their posting rates compared with users in the control group ($z = -1.85$, $p = 0.06$). Treated users in the fourth quintile were significantly less likely to increase their posting rates compared with users in the control group ($z = -2.18$, $p < 0.03$) and significantly more likely to decrease their posting rates compared with users in the control group ($z = 1.94$, $p = 0.05$). The differences in the other quintiles are not statistically significant.

Managerial Implications

Reconciling the Findings:

- Two stage process:
 - Few followers - intrinsic utility dominates
 - More followers - image related utility dominates

Managerial Implications:

- Brand advocates not always going to be users with large follower count
 - Image concerns will start to kick in
 - (How to reconcile with the current focus on influencers?)
- As social media platform matures might see more firm generated content
 - An alternate way to broadcast to consumers
 - As opposed to a social listening platform for firms

Lurkers on Social Media

Participation on Social Media Platforms

Lurker: a user of social media site who does not actively participate/contribute.

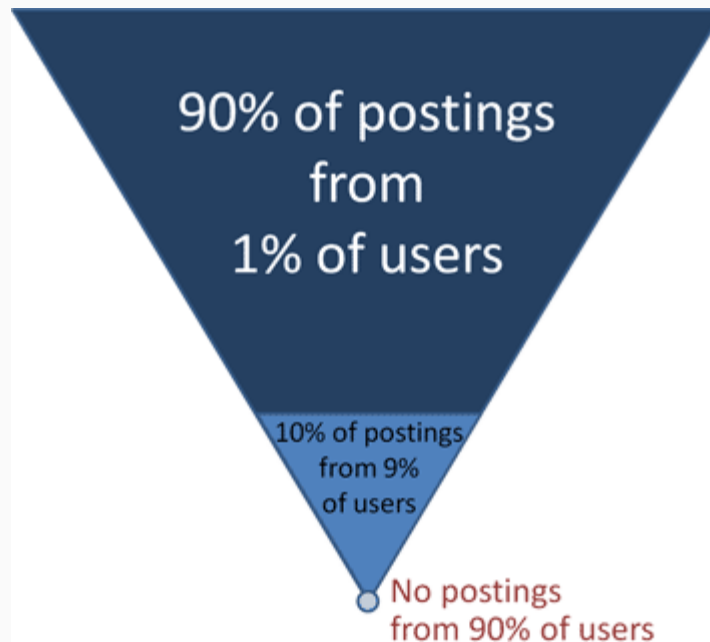
(adapted from Oxford Dictionary)

- So far: focus on *contributing* to social media platforms
- Missing (a **large**) something ...
 - Lurkers

The 90-9-1 Rule

Nielsen Research suggests:

- 90% of users are lurkers (i.e., read or observe, but don't contribute)
- 9% of users contribute from time to time.
- 1% of users participate a lot and account for most contributions



Evidence on Lurker Prevalence?

- Is the correct breakdown really 90-9-1?
- One can readily find other estimates out there with a **big** range
 - 98-1.9-0.1
 - 70-20-10
 - 55-25-20
- Though *rarely* are these numbers held up to intense scrutiny
 - Recently refereed estimate: 75 percent lurkers ([Antelmi et al, 2019](#))
- How much does the exact distribution matter?
 - I'd argue not *as* much as we might think...
 - ... **but** we must to take into account that **lurking matters**

The Marketing Value of Lurkers

- First thought one might have: "lurkers are low value users"
- It's more nuanced than that ...
 - Lurkers still engage and may make decisions based on what they see online
 - And these decisions may matter
- Distinction between (Chen et al, 2019)
 - **passive lurkers**: absorb content and don't spread information
 - **active lurkers (diffusers)**: transmit information to others

The Marketing Value of Active Lurkers

Active Lurkers transmit information to others

Generate value from:

- Value from diffusion
 - Share information with others
 - Others directly engage and also share to another group of people
- Value from own decisions
 - Their purchase, clicks, brand recall, etc

The Marketing Value of Passive Lurkers

Passive Lurkers absorb content but don't spread information

Generate value from:

- Own decisions based on what they see on social media...
 - Example: Positive movie reviews from Twitter → go see the movie
 - Example: See an ad on Facebook → buy via a different channel
- I've (again) focused on purchase
 - But brand recall, website clicks, other aspects too

Solutions to Lurking: Social Media Sites

Why people lurk?

Explanations include:

1. Browsing is enough for me
2. Maintains my privacy
3. Reputation concerns and/or anxiety

How to engage lurkers?

Current practice:

- Posts that are not permanent (Instagram Stories, Twitter's Fleets, ...)
 - Lurkers → contributors
- Repeated interaction with same content (seeing many retweets of same content)
 - Encourage active lurkers to spread the information
 - Why? lesser "need for uniqueness" in lurkers

Dealing with Lurking as an Analyst

If you use **data** on individual behaviour **on social media** as your **only data** set you **cannot measure impacts of lurkers**

Example: Do Instagram ads increase sales?

- If the analyst uses data from the ad campaign...
- They see:
 - Who saw an ad,
 - Who clicked on it, and
 - Who bought after clicking on the ad
- Can quantitatively assess this funnel for users who **engage** with the ad **on the platform**
- But they can't measure whether:
 - A lurker viewed the ad and bought due to it via another channel
 - The lurker passed on information from the ad to someone else and that person made a purchase later

Dealing with Lurking as an Analyst

If you relate **social media aggregates** to an **aggregate outcome** variable **lurker effects are "baked" into** one's analysis

Example: daily volume and sentiment of all tweets about a product on daily sales

How? Aggregation means that:

- **Anyone** who has seen a post on Twitter **might respond** to the content
- Impact on sales could be from
 - Original content creator, active site users,
 - Active lurkers, passive lurkers,
 - Or *anyone else* who saw it
- But **we can't tell which**
 - This may or may not be what we wanted ...
 - ... it *depends on the question* we want to answer

Remark: these kind of studies have other (serious) analytics issues we must worry about

- We'll get to these issues in future weeks

Recap

Recap

- "Social Media" encompasses a wide variety of platforms
 - Anywhere there is user generated content
- Consumers use social media platforms when deciding what to purchase
- People contribute to social media platforms for "Intrinsic" and "Image" reasons
- The majority of social media users are lurkers
 - But they still have marketing value - though harder to measure

Your Remaining Tasks for this Week

1. Work through the self-guided tutorial
2. Watch the Demonstration Video
3. Complete the Weekly Quiz on Canvas
4. Submit your topic preferences for the next Discussion Sections

License & Citation

Suggested Citation:

```
@misc{smwa2021_lecture01,  
  title={"Social Media and Web Analytics: Lecture 1 -  
        The Social Media Landscape"},  
  author={"Lachlan Deer"},  
  year={2021},  
  url = "https://github.com/tisem-digital-marketing/smwa-lecture-01"  
}
```



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