

Social Media Analytics



Social Media and its impact

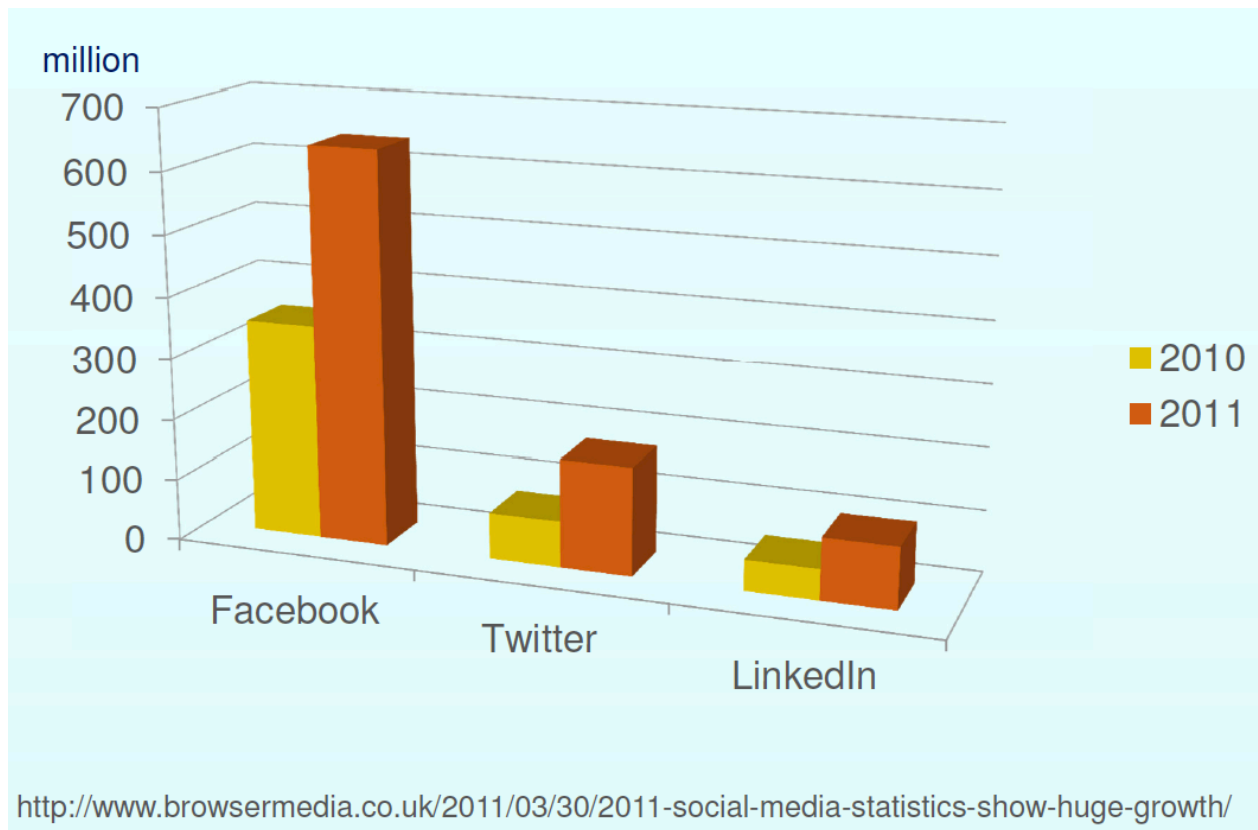
- Social networking, blogging, and online forums have turned the Web into a vast repository of comments on many topics, generating a potential source of information for:
 - social science research
 - market and politics forecasts
 - syndromic surveillance
 - information warfare
 - new opportunities for media communication

Social media revolution

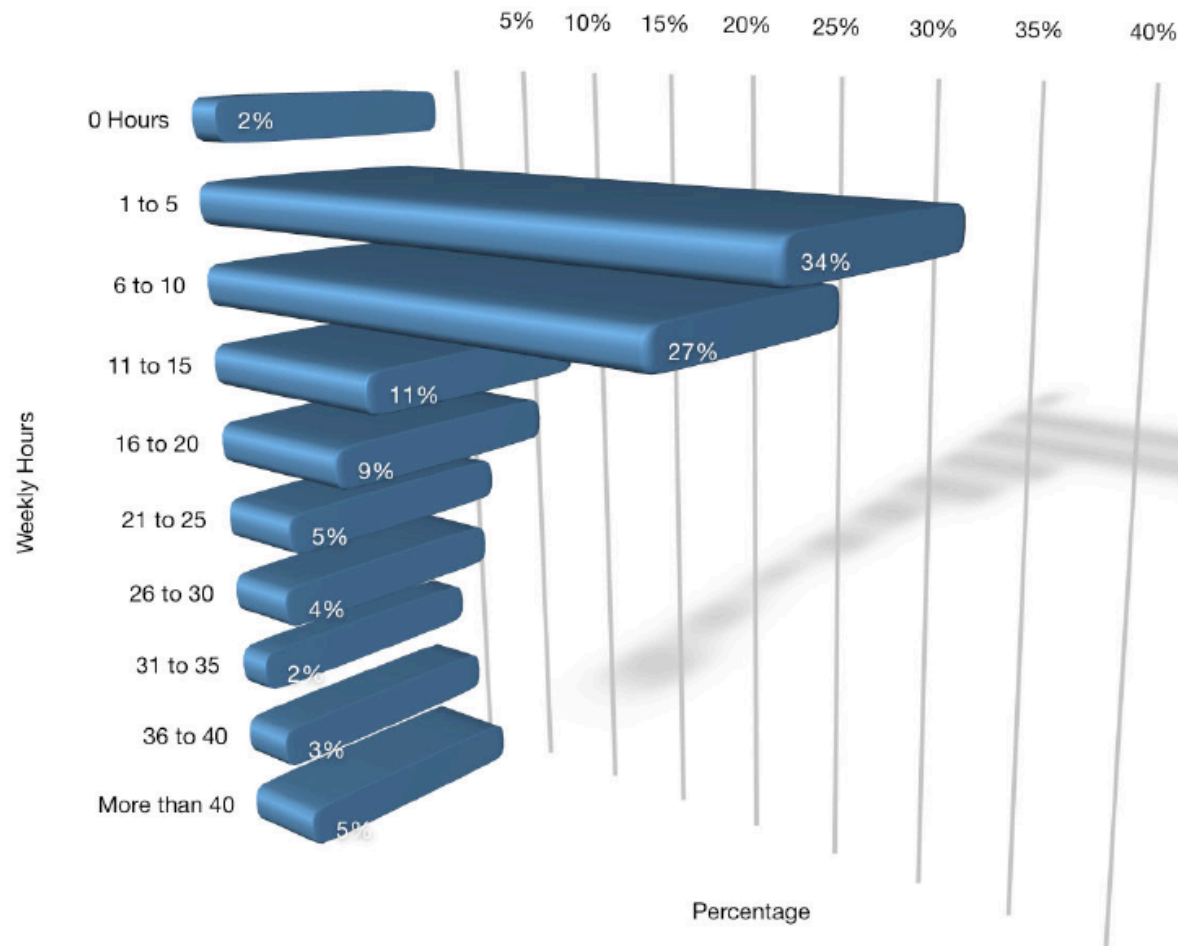
- Changing the way individuals and organizations engage, interact and collaborate
- New opportunities for real time analysis and predictive analytics creating insight from more and more data
- Appealing for business, public bodies and scientists (both ICT and social scientists)

How big is “social media”?

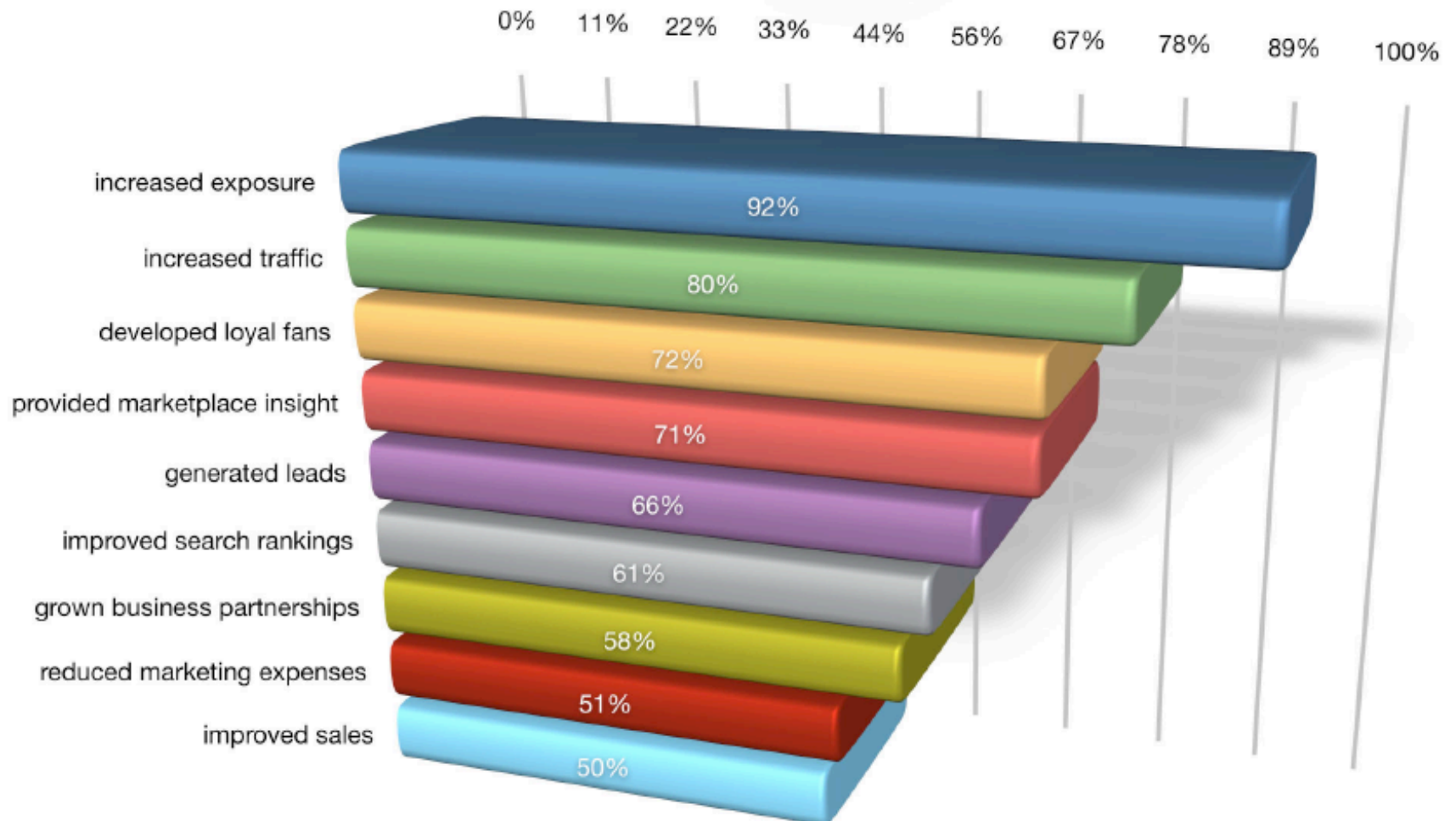
- **72% of Internet users** are part of at least one social network, which translates to **940 million** users worldwide



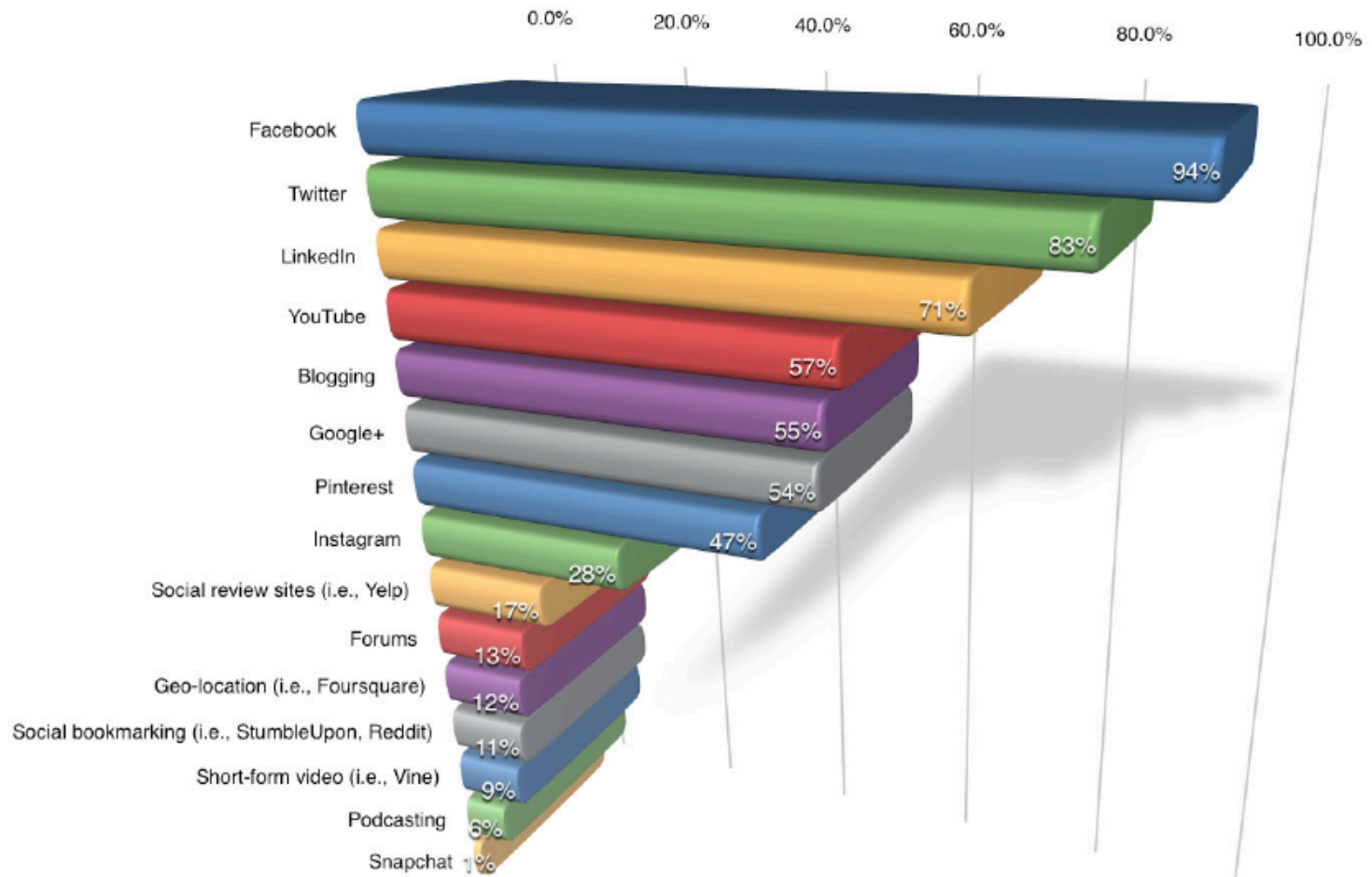
64% of marketers use social media more than 6 hours weekly



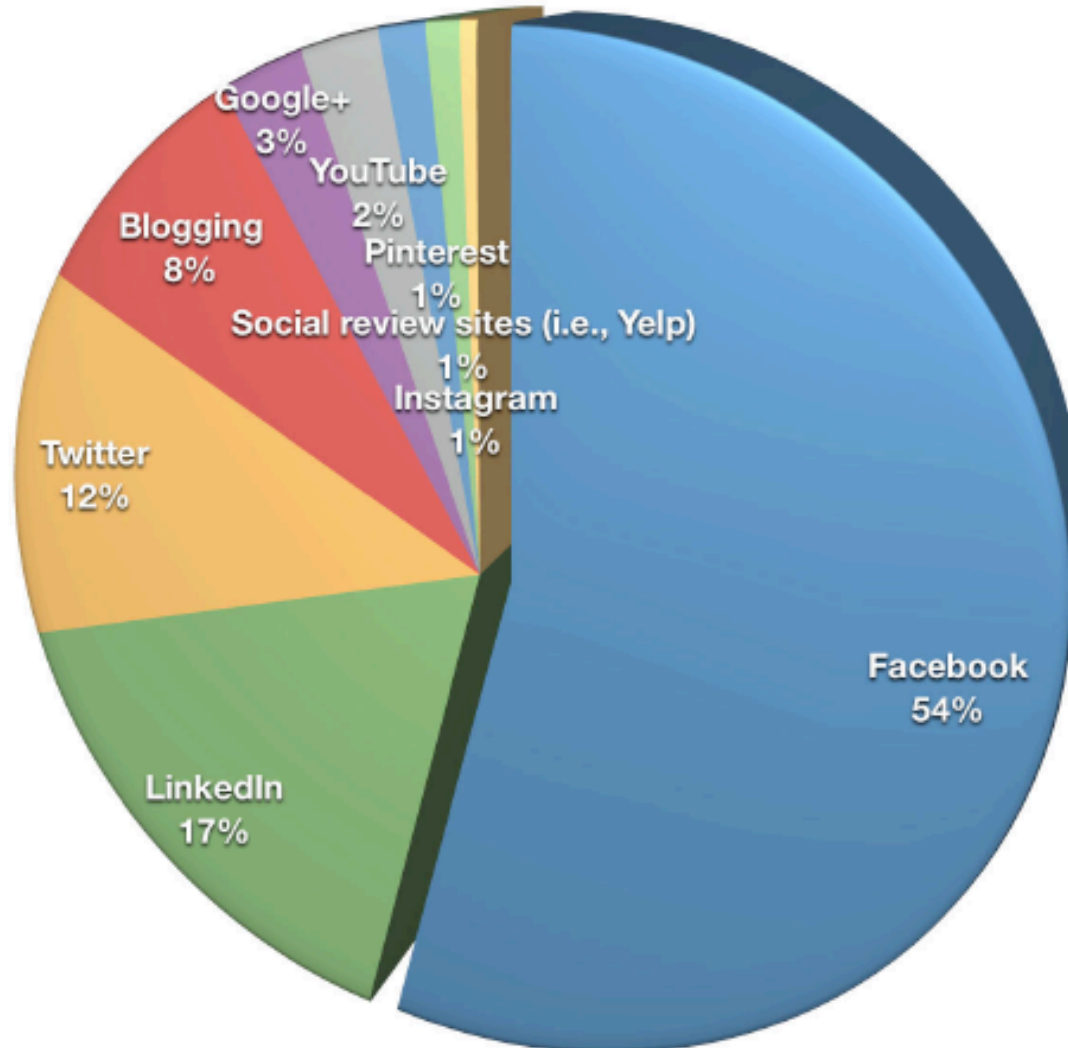
Benefits of social marketing



Commonly used social platforms



The most important platform for marketers is..



Impact on common users

- **“Only 14% of people trust advertisers yet 78% of consumers trust peer recommendations.”**

Erik Qualman’s book “Socialnomics”, 2009

Impact of Social Media



Impact of Social media

- Why are social networks and social analytics important for **media**, **business** and **public bodies**?
- **“If you wish to persuade me, you must think my thoughts, feel my feelings, and speak my words.” (Tullius Marcus Cicero)**
- Social media are the new data source to better engage **audience/ customers /citizens**

Impact of Social Media on Products

- General Motors cancels '*Hideous*' Buick SUV after "*Would-Be Customers*" on Twitter!
- ONE week after announcing a new Buick SUV Christopher Barger, GM's spokesman for social media said: "*The decision was based on customers' input - face-to-face, blogs and tweets. No matter how they expressed it "they just didn't like it."*"

<http://www.bloomberg.com/apps/news?pid=newsarchive&sid=aHsoNjdHUQLY>

Impact of Social Media on Products



- Del Monte created a new “hot-selling” dog food snack in 6 weeks
- Used a social community to *source for creative ideas (crowdsourcing)* and create a new product
- Demonstrates the potential power of social media marketing to influence product sales

http://www.youtube.com/watch?v=yP_3bpCPZaQ

Impact of Social Media on Organisations

Nestlé vs Greenpeace Palm Oil from Destroyed Rainforest

- Nestlé, maker of Kit Kat, uses palm oil from companies that are trashing Indonesian rainforests, threatening the livelihoods of local people and pushing orang-utans towards extinction.
- Nestlé persuaded YouTube to remove Greenpeace's video
- Storm ensued on Nestlé Facebook page
- TWO months later, Nestlé announced a “zero deforestation” policy in partnership with The Forest Trust (TFT)

*“Social media: as you can see we're learning as we go.
Thanks for the comments.”*

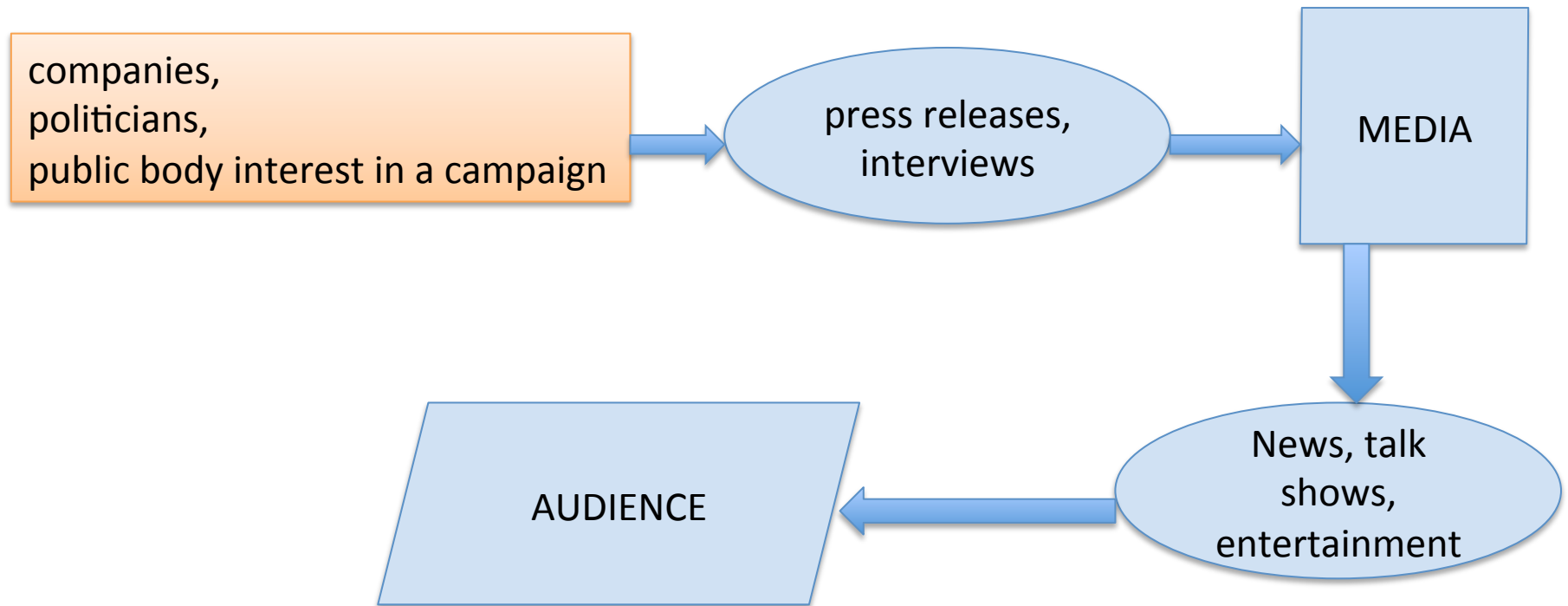
Impact of Social Media on Government

25th Jan 2011 Egypt Blocked Twitter and Facebook!



Egyptian protesters have openly thanked social media's role in the revolution against the country's ruling government.

Social Networks also impact on **media** **and communication**

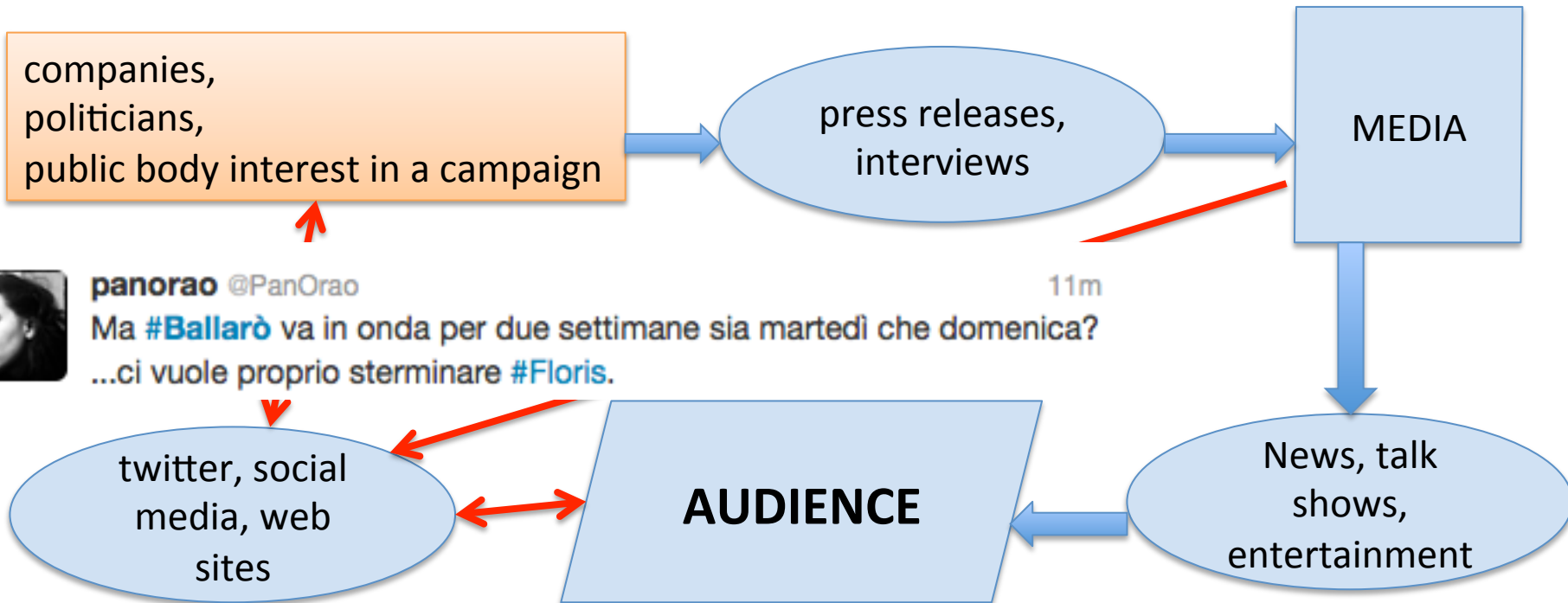


Traditional method to reach audience

The social media revolution



Oscar Giannino xFARE @gianninoxFARE
Nuntio vobis magnum gaudium: Stasera habemus @oGiannino a
#ballarò



panorao @PanOrao 11m
Ma **#Ballarò** va in onda per due settimane sia martedì che domenica?
...ci vuole proprio sterminare **#Floris**.



Ufficio Stampa Rai @stampaufrai 2h
Questa sera a **#Ballarò** Roberto Maroni, Luigi De Magistris, Oscar Giannino e un'intervista a Silvio Berlusconi [ufficiostampa.rai.it/comunicati_tv/...](http://ufficiostampa.rai.it/comunicati_tv/)

The ICT revolution and new media

- news media, websites, social media and Twitter can be used by audiences, **but also by stakeholders and the media** (**#partitodemocratico, #ballarò,..**)
- Audience members can publish their opinions in the new media but are also **influenced themselves** by opinions of others in the new media



Marco Hanaman @Fare2013Hanaman

«La nostra risposta a Berlusconi è semplice: per noi i voti inutili e dannosi sono quelli a lui, al **Pd** e a Monti» [#Fare2013](#) [#OGiannino](#)

Social Networks Measures

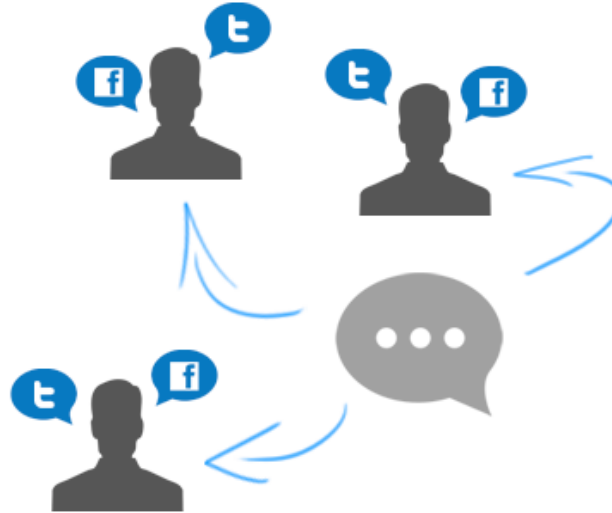
- **Surface Measures:** Based on some properties of specific nodes
- **Graph-based measures:** Based on the graph-structure of the network

Measuring properties of individual nodes (users, web pages..)

Key measurement goals



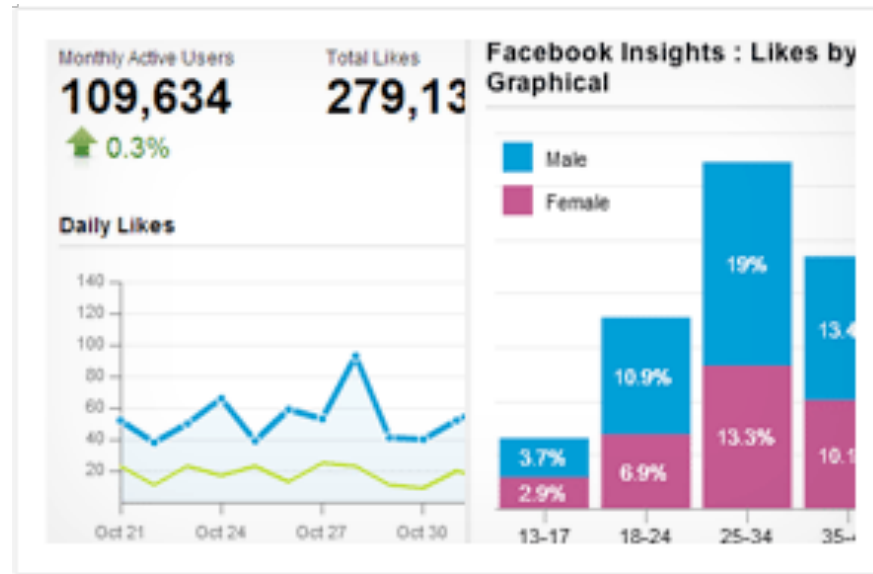
1. Reach



1. Reach
2. Buzz
3. Influence
4. Sentiment

- Reach
 - Size of your audience
 - How many saw your message
 - E.g. Twitter followers
 - Facebook posts (“seen by..”)

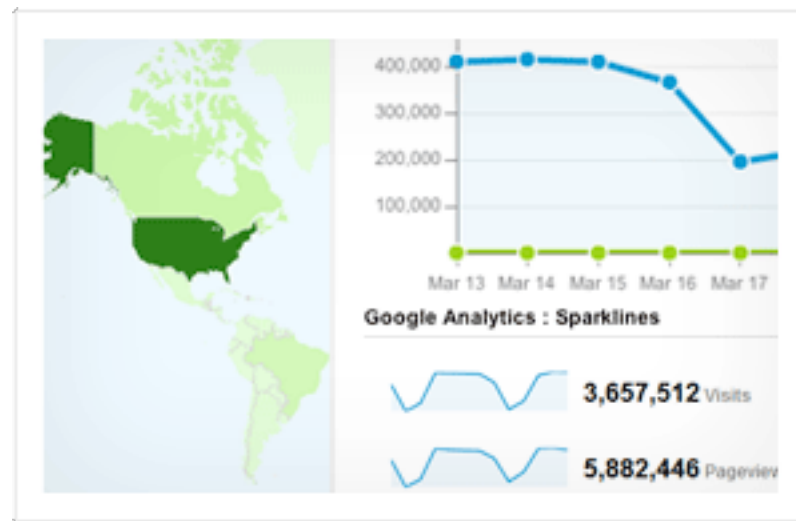
Reach: Facebook Insights



Monitor and measure your fans, likes, comments and page activity

Reach: Google Analytics

<http://www.google.com/analytics/>

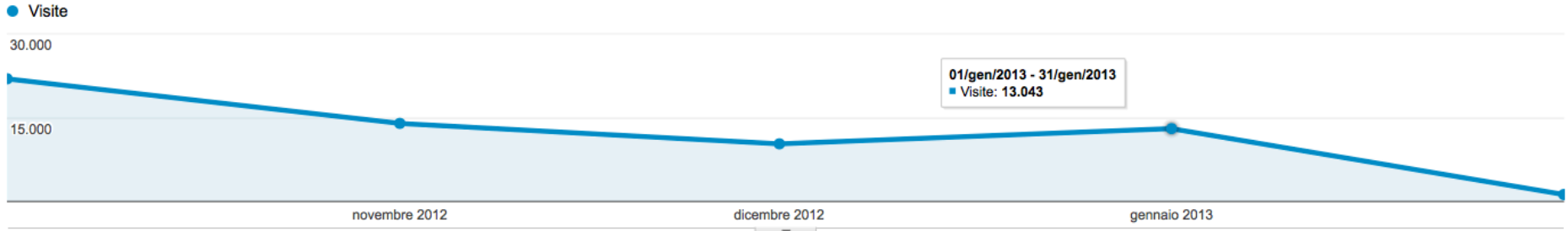


With Google Analytics tool, you can monitor accesses on your web page. Drill down into site traffic data including source, and region. View sparklines for page views, bounce rates and more.

Panoramica

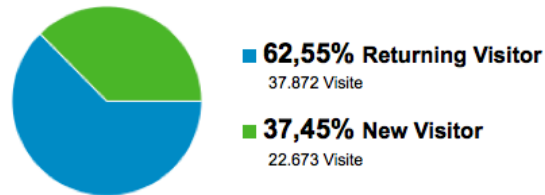
Visite e Seleziona una metrica

Ora Giorno Settimana Mese



24.556 persone hanno visitato questo sito

- Visite: 60.545
- Visitatori unici: 24.556
- Visualizzazioni di pagina: 184.624
- Pagine/visita: 3,05
- Durata media visita: 00:02:50
- Frequenza di rimbalzo: 40,35%
- % nuove visite: 37,39%



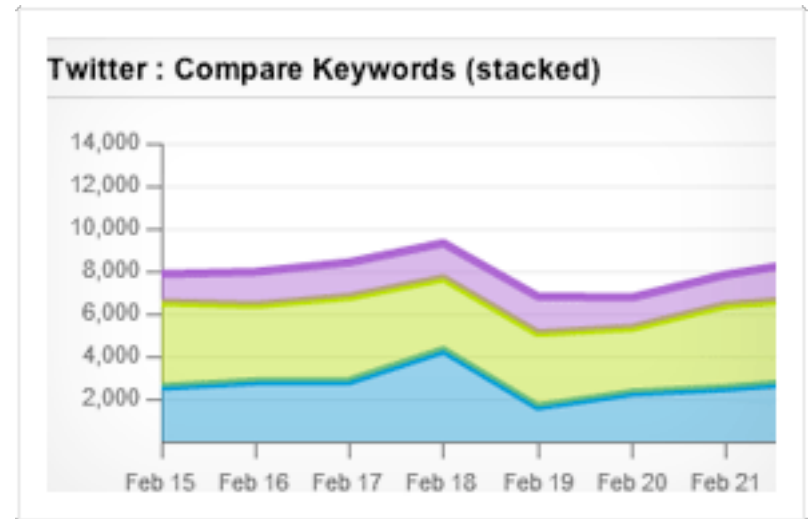
Dati demografici

- Lingua
- Paese/zona
- Città
- Sistema

Lingua	Visite	% Visite
1. it	28.416	46,93%
2. it-it	24.352	40,22%
3. en-us	5.045	8,33%
4. en	1.844	3,05%

Reach: Twitter Profile statistics

- Track the number of followers, mentions, lists..
- Do more by comparing keywords over time and Twitter sentiment.



<http://www.tweetstats.com//>

TweetStats

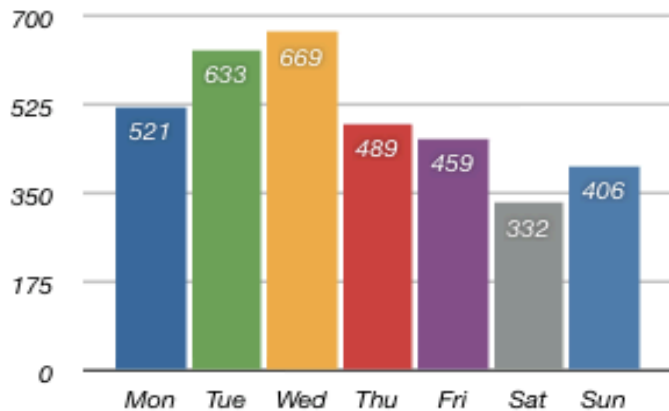
In ur Tweets, Graphin' Your Stats!

[Home](#)

[Trends](#)

[Donate](#)

Tweets per Day



Graph your Twitter Stats including

Tweets per hour

Tweets per month

Tweet timeline

Reply statistics

In use by nearly 1,000,000 Twitter-folk!

Enter your Twitter username

Graph My Tweets!

Looking for simple
Social Media Monitoring?



Simply Measured

Brought to you by @dacort!

Refresh your stats - stats get updated when you come back after 8 hours and enter your username.

Measures of Social Reach

- **Social reach**: #total followers across all social platforms
- **Growth**: month-over-month social reach growth
- **Engagement**=

$$\frac{\# \text{ Likes} + \# \text{ Shares} + \# \text{ Retweets} + \# \text{ blog comments}}{\# \text{ of published posts or pieces of content}}$$

2. Buzz



1. Reach
2. **Buzz**
3. Influence
4. Sentiment

- **Social Buzz** is the “amplification” of a topic/message through social media: what are people saying about you, where are they saying it, how are they saying it
 - 2 types:
 - Conversation Focus (@RP, reply) vs. Content Focus (#topic)
- Mining **motivations** (text), in addition to data, as a way to understand an audience (either customers, voters, patients, or addressee of a campaign), is an entirely new approach to social analysis (e.g. opinions on #topic).

Buzz Metric example (1)

- Buzz metrics tool around the online social media elements related to the two U.S. Presidential candidates in 2012.
- Based on three measures:
 - **bookmarking,**
 - **social networking,**
 - **social knowledge**

Buzz Metric example (2)

- **Bookmarking:** Social bookmarking relates to social media websites such as Digg, Del.icio.us, and Reddit. Users submit links to these websites that are of interest to them and other users vote on particular submissions of interest in order to increase their popularity.

Bookmarking

digg

Top Stories

Popular

Upcoming

'Girls? Ladies? Folks?' A Visual Guide To What You Should Call That Group Of Individuals

forbes.com

If your head hurts every time you have to think about how to generically refer to a person based on the presence or absence of the Y chromosome, you're in luck. For those not immersed in the study of gender semantics, here is a handy guide for which term to use when.

606

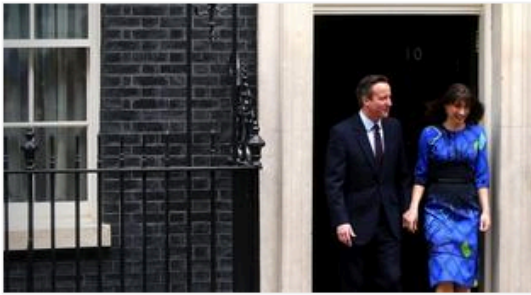
 Digg

 Save

 Share

Buzz Metric example (3)

- **Social Networking:** Social Networking refers to communities such as MySpace, Facebook, and Friendster. **Account creation, total friends, mentioning of company on a particular page**, and other important factors to determine the total buzz.



DRIVING ON THE RIGHT AGAIN

UK Conservatives Pull Shock General Election Win

BBC · News

David Cameron is heading back to Downing Street as prime minister after the Conservatives win a majority — but Ed Miliband, Nick Clegg and Nigel Farage all resign as leaders of his rival parties.



SPRING FORWARD

US Economy Added 223,000 Jobs in April; Unemployment Rate at 5.4%

714 The New York Times · Nature

The April figures from the Labor Department came as a few reports showed weak economic data, including new numbers this week suggesting that the economy might have actually shrunk in the first quarter.

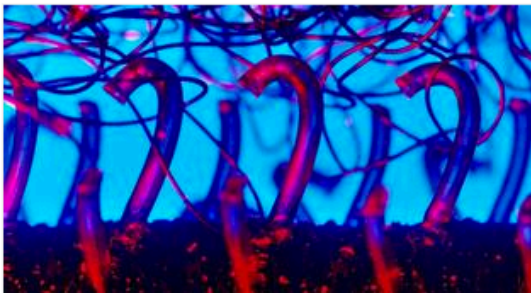


WHAT WE LEARNED THIS WEEK

Friendship Will Get You Everywhere And Other Facts

12 Digg · Originals

This week we learned that flattery will not get you everywhere, the profound effects a leaf blower has on a chiminea and Ken Jennings might be a robot.

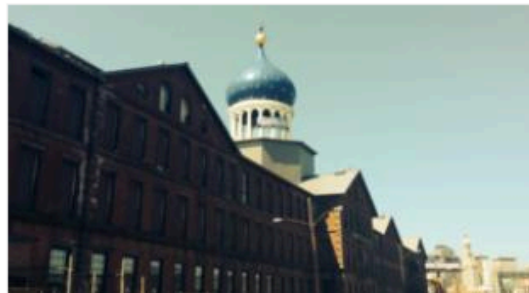


AND A COCKTAIL TO GO WITH IT

This History Of Velcro

9 Digg · Originals

This week, the "Dinner Party Download" podcast tells us all about how a Swiss engineer devised a "space-age" fastener we now know as Velcro, and gives us a custom drink to go down with the history



BAR ONLY SERVED COLT 45

Coltsville, USA: Inside America's Gun-Funded Utopia

169 atlasobscura.com · Histories

Samuel Colt felt such responsibility for the welfare of his workers outside the factory that he went so far as



TO HAVE AND TO HEAP

I Kept Track Of My Garbage For A Week And Became An Even Stauncher Commie

131 hopesandfears.com · Economics

We asked a friend to write down every last thing she

Buzz Metric example (4)

- **Social Knowledge:** Social Knowledge refers to informational based websites such as “Yahoo! Answers” and “Wikipedia”. Buzz is calculated differently on each of these websites.

Social Knowledge

Yahoo! Answers



Resolved Question Show me another »

Honestly, what's a democrat?

Arthur Reeves 2 years ago Report Abuse



Best Answer - Chosen by Asker

I don't know much about politics and I don't know what the democratic party of the past has been like, but I can tell you what I know about it now:
Democrats are into big government:
They want the government to take care of people with welfare, medicaid, unemployment, etc.
Democrats care more about social issues like gay rights, abortion, etc.

That is all I know.

There is a lot more to research before you support one party or the other and I suggest you do.

Source(s):
A democrat because of my social liberalism.

2 years ago Report Abuse

 1 person rated this as **good**

Asker's Rating: *****
Thank you Andi

 Interesting  Email  Comment (0)  Save    

 This question about "Honestly, what's a d..." was originally asked on Yahoo! Answers United States

Other Answers (4)

Buzz Metrics example (5)

- Trending topics: what (most) people is talking about on the web. Can be detected by analyzing “patterns of attentions” e.g. temporal sequences of words in messages or in users’ queries that show a “bursty” behaviour

Donald trump
Termini di ricerca

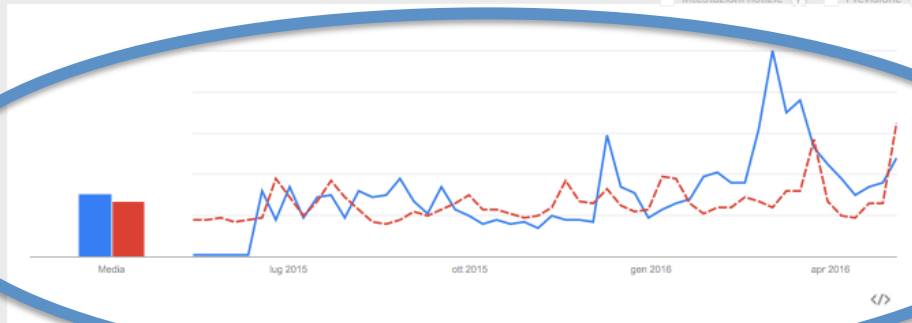
Barack Obama
44th U.S. President

+ Aggiungi termine

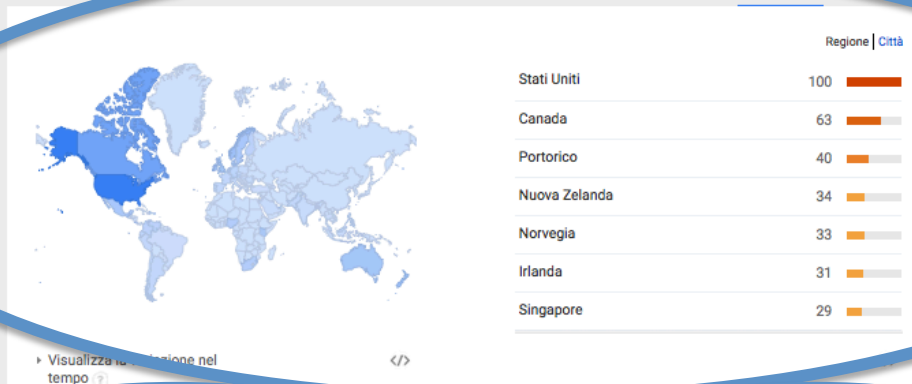
Beta: la misurazione dell'interesse di ricerca per gli argomenti è una funzione beta che fornisce rapidamente misurazioni accurate dell'interesse di ricerca generato per misurare l'interesse di ricerca per una determinata query. L'opzione "termini di ricerca".

Google Trends

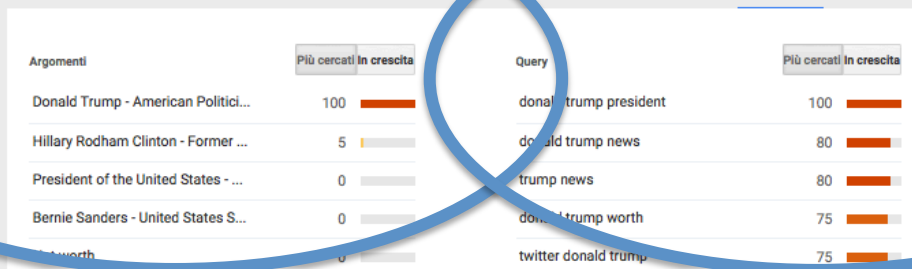
Interesse nel tempo



Interesse regionale



Ricerche correlate



Buzz Metric example (summary)

Website	Bookmarking	Social Networking	Social Knowledge	Total Buzz
RNC.org	272	142	314	728
GOP.org	28	56	85	169
Democrats.org	2,963	1,880	1,682	6,525
DemConvention.com	365	338	230	933

RNC and GOP = Republican official websites
Democrats and DemConvention = same for Democrats

Buzz Metric example (summary)

Additional (simpler) measures

Keyword	Google	Yahoo	MSN	Total
Republican	84,300,000	453,000,000	20,700,000	558,000,000
Republican Party	14,500,000	209,000,000	19,500,000	243,000,000
Democrat	50,600,000	201,000,000	9,560,000	261,160,000
Democratic Party	25,900,000	254,000,000	24,400,000	304,300,000

Website	Traffic Rank	Links	Page Views	Competitive Rank
RNC.org	161,445	225,532	1	4
GOP.org	1,036,860	14,288	1	7
Democrats.org	31,738	1,109,598	2.2	1
DemConvention.com	23,993	154,377	1.7	3

3. Influence



1. Reach
2. Buzz
- 3. Influence**
4. Sentiment

- Your message is valuable when it is repeated and/or commented
 - High probability of others referencing & reproducing what you say
 - E.g. Twitter: reply/mention (@xxx) & retweet (RT)

Twitter as a mean to disseminate information

- Its primary function is not as a social network but perhaps to **spread news** (including personal news) or other information.
- An unusual feature of Twitter is **re-tweeting**: forwarding a tweet by posting it again: “Hmmm pretty good incentive.. RT [@RT.com](#): US high school allows Muslims time for prayer if they earn good grades <http://on.rt.com/kka96w>”
- If re-tweeted, a tweet can expect to reach an average of **1000 users (Kwak et al.)**
- Another communicational feature of Twitter is the **hashtag**: a meta-tag beginning with # that is designed to help others find a post:



grumpybutcuddly @grumpybutcuddly · 51 min

With a majority #Cameron will be able to sort out boundary changes & English votes for English matters & end left wing politics forever :-)



Influential Analysis (Twitter)

- **Retweet** and **Reply** features of Twitter is used to enable real-time study

$$\text{Influential Index} = \frac{n(\text{Reply}) + n(\text{Retweet})}{n(\text{Tweet})}$$

For example, a tweet :

Verizon will launch iPhone 4 on 10 Feb sent by user ABC

Retweet (think of it as forwarding)

RT @ABC Verizon will launch iPhone 4 on 10 Feb

Reply

@ABC thanks... I will be there to get one

Influential Analysis : Amplification



- On Twitter:
 - Amplification = # of Retweets Per Tweet
- On Facebook, Google Plus:
 - Amplification = # of Shares Per Post
- On a blog, YouTube:
 - Amplification = # of Share Clicks Per Post (or Video)

Influential Analysis : Applause



- On Twitter:
 - Applause Rate = # of Favorite Clicks Per Post
- On Facebook:
 - Applause Rate = # of Likes Per Post
- On Google Plus:
 - Applause Rate = # of +1s Per Post
- On a Blog, YouTube:
 - Applause Rate = # of +1s and Likes Per Post (or video)



Summary (Reach, Buzz, Influence)

Measure		
Reach	Social reach	#total followers
	Growth	social reach growth along time
	Engagement	$\frac{\# \text{ Likes} + \# \text{ Shares} + \# \text{ Retweets} + \# \text{ blog comments}}{\# \text{ of published posts or pieces of content}}$
Buzz	Nominations /visualizations	#bookmarks, #mentions on web, #likes, keyword trends
Influence	Influential index	$(\# \text{ reply} + \# \text{ retweets}) / \# \text{ tweets}$
	Amplification	# of Retweets (Shares) Per Tweet (post)
	Applause	#favorite clicks (or like, or +) x post

Sentiment analysis in a dedicated lesson