Social Networks and Communication Management

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Course description

The aim of this module is to introduce students into the theories, methods and practices on social networks and management communications. For that purpose, the students will learn about graph theory, community structure and concepts related to social networking, such as homophily and polarisation. Besides this, students will also learn about the main methods for collecting, processing and analysing data from social networks, and take key decisions based on the results of the analysis. The student will be asked to design a business communication plan in social networks and to develop communication strategies to improve the performing of social media in a business.

ECTS Credits

4 ECTS

Specific competences

- o Apply communication research theories and methods.
- o Use the main concepts, theories and methodologies of analysis related to social media and digital communication.

Learning outcomes

The student will learn:

- o The main theories related to social networks and social media.
- o Understanding the main concepts in social networks and social media.
- o How to take communicative decisions based on social media listening (collection, processing and analysis)
- o How to use the tools for analysing social media (sentiment analysis)
- o How to evaluate the impact of a campaign in social media.
- o Tracking traffic in social media. UTM codes

o Create a social media plan for managing communication in an organization

Content

Theory

1. **Introduction to Social Networks**

   a. What are social networks? Newman(?)
      i. Graph Theory
   b. Main concepts
      i. Homophily in Social Networks
      ii. Community structure: clusters and polarisation. Types of structures
      iii. Strong and weak ties in Social Networks
      iv. Other concepts

2. **Social Network Sites**

   a. An Introduction to Social Network Sites
   b. Towards a New Communication paradigm?
      i. Circular communication
   c. Characteristics of SNS
      i. Facebook
      ii. Twitter
      iii. Instagram
      iv. Youtube
      v. Other

3. **Understanding Social Media**
   a. Social Media ROI and Metrics
   b. Influence in social networks
   c. eWoM

Managing communication in Social Networks: Evaluation and Analysis

4. **Tools for analysing social networks**
   a. Academic tools
      i. Netvizz for Facebook
      ii. TAGS for Twitter

    b. Professional tools

5. **Analysing Social Media:**
   a. API /Keys
   b. Programming
   c. Collecting data
   d. Data processing
   e. Data analysis

6. **Outcomes**
   a. Data visualisation

Production and impact measurement

7. **Social Media Marketing Strategy. Managing communication in Social Media**
8. Social Media Content Analysis (diagnosis)
9. Social Media Production (implementation)
10. Impact analysis (metrics)

Method of presentation

The teaching methodology of this module will be:

- About 90 minutes lectures in classroom per session. Presentation of the main theoretical concepts and contents.
- Case studies to foster debates about the use of social media by companies and organizations.
- Workshops to put in practice topics on social media.
- Webinars with experts in social media analysis.
- Individual tutoring.

Course assessment

- Individual Social Media benchmark (40% of the final grade)
- Individual Social Media Communication Strategy project (45% of the final grade)
- Attendance and participation in class (15% of the final grade).

Course schedule

Week	Content
1	**Fundamentals of social networks** Reading: **Connected: the amazing power of social networks and how they shape our lives** Discussion about the concepts of **homophily**, **polarization, filter bubbles** and **echo chambers**.
2	**Introduction to Social Network Sites.** Main characteristics of Social Network Sites Reading: boyd & Ellison (2007). **Social Network Sites: Definition, History, and Scholarship**
3	Analysing Social Media: Social Media Content Analysis (diagnosis) Fundamentals for the **Individual Social Media benchmark**
4	Social Media ROI and Metrics Reading: Blanchard, Olivier (2011). **Social Media ROI. Managing and Measuring Social Media Efforts in Your Organization**
5	**Experimental session:** Tools for analysing social networks Netvizz / TAGS Analysing Social Media: API /Keys, Programming, Collecting data, Data processing, Data analysis
6	**Social Media Marketing Strategy**. Managing communication in Social Media Case studies Fundamentals for **Social Media Communication Strategy project**
7	**Social Media Marketing Strategy**. Managing communication in Social Media Case studies Fundamentals for **Social Media Communication Strategy project**
8	**Social Media Marketing Strategy**. Managing communication in Social Media Case studies

9	Fundamentals for **Social Media Communication Strategy project**
	Experimental session. **Data visualization**
	Cytoscape / Gephi / Tableau
10	**Final works presentation**

Required reading

Blanchard, Olivier (2011). Social Media ROI. Managing and Measuring Social Media Efforts in Your Organization. Boston: Pearson Education.

boyd, d., & Ellison, N. B. (2008). Social Network Sites: Definition, History, and Scholarship. Journal of Computer-Mediated Communication, 13(1), 210–230. doi:10.1111/j.1083-6101.2007.00393.x

Guerrero-Solé, Frederic (2016). Community detection in political discussions on Twitter. An application of the Retweet Overlap Network method to the Catalan process towards independence. Social Science Computer Review. doi:10.1177/0894439315617254

Christakis, N. A., & Fowler, J. H. (2010). Connected: the amazing power of social networks and how they shape our lives. Journal of Family Theory Review (Vol. 3). Retrieved from http://www.worldcat.org/isbn/9780007347438

Ihm, J. (2015). Network measures to evaluate stakeholder engagement with nonprofit organizations on social networking sites. Public Relations Review, 41, 501-503. DOI: 10.1016/j.pubrev.2015.06.018

Ruehl, C. H., & Ingenhoff, D. (2015). Communication management on social networking sites. Journal of Communication Management, 19(3), 288–302. http://doi.org/10.1108/JCOM-04-2015-0025

Recommended reading

Angelo, T & Boehrer, J. (2002). Case learning: How does it work? Why is it effective? Case Method Website: How to Teach with Cases, University of California, Santa Barbara. http://www.soc.ucsb.edu/projects/casemethod/teaching.html

Weintraub, M., & Litwinka, L. (2013). The Complete Social Media Community Manager's Guide. Canada. Wiley & Sons. https://sproutsocial.com/insights/social-media-campaign-tracking/

Recommended tools

Name	URL	Platform (if >4, "many")	
Amazon tools (2)	https://wiki.digitalmethods.net/Dmi/ToolDatabase	Amazon	analytics for Amazon.com's book search and enter a (set of) ASIN(s) and crawl its recommendations up till a user-specified depth
catwalk	https://medialab.github.io/catwalk/	Twitter	A tweet curation tool for humanities. Takes output from Gazouilloire or TCAT and lets one easily browse all tweets to select them qualitatively.
data.world	https://data.world/socialmediadata	many	Data sets from different social media channels
Digital Methods Initiative	https://wiki.digitalmethods.net/Dmi/ToolDatabase	many	huge variety of tools for many platforms
DiscoverText	https://discovertext.com/	many	cloud-based software tools to quickly evaluate large amounts of text, survey, public comment, and Twitter data
Discus Comment Scraper	https://wiki.digitalmethods.net/Dmi/ToolDisqusScraper	Disqus	This tool scrapes threads and comments from websites implementing the Disqus commenting system.
F(b)arc	https://github.com/justinlittman/fbarc	Facebook	commandline tool and Python library for archiving data from Facebook using the Graph API.
Gephi	https://gephi.org/	n/a	visualization and exploration software for all kinds of graphs and networks
Github Tools (6)	https://wiki.digitalmethods.net/Dmi/ToolDatabase	Github	meta-data of organizations on Github, repositories, and users; Scrape Github for forks of projects, user interactions and user to repository relations; Find out which users contributed source code to Github repositories
Google Autocomplete	https://wiki.digitalmethods.net/Dmi/ToolGoogleAutocomplete	Google	Retrieves autocomplete suggestions from Google
Google Books Ngram Viewer	https://books.google.com/ngrams		Graph these comma-separated phrases between date 1 and date 2 in a textual corpus
Google Image Scraper	https://wiki.digitalmethods.net/Dmi/ToolGoogleImagesScraper	Google	Query images.google.com with one or more keywords, and/or use images.google.com to query specific sites for images.
Google Reverse Image	https://wiki.digitalmethods.	Google	Scrape Google for occurrence of

scraper	net/Dmi/ToolGoogleReverseImages	images	
Google Cloud Vision API	https://cloud.google.com/vision/	images	Analyse images uploaded in the request or integrate with your image storage on Google Cloud Storage
Hyphe	http://hyphe.medialab.sciences-po.fr/	web	crawl data from the web to generate networks between what we call WebEntities, which can be single pages as well as a website or a combination of such.
igraph	http://igraph.org/	n/a	network analysis tools with the emphasis on efficiency, portability and ease of use
Instagram Hashtag Explorer	https://wiki.digitalmethods.net/Dmi/ToolInstagramHashtagExplorer	Instagram	Retrieve either the latest media tagged with a specified term or the media around a particular location.
Itunes Store	https://wiki.digitalmethods.net/Dmi/ToolItunesStore	iTunes	This tool queries http://itunes.apple.com/linkmaker/, retrieves all available results and outputs a csv file, as well as a gexf file containing the relations between items in the itunes stores and their categories
MAXQDA	https://www.maxqda.com/	n/a	helps you collect, organize, analyse, visualize and publish your data in various methodological frameworks
Netlytic	https://netlytic.org/	Twitter, Instagram, YouTube, Facebook	text and social networks analyser that can automatically summarize and discover communication networks from publicly available social media posts
Netvizz	https://wiki.digitalmethods.net/Dmi/ToolNetvizz	Facebook	extracts data from different sections of the Facebook platform (groups, pages, search)
News Agencies Scraper	https://wiki.digitalmethods.net/Dmi/ToolNewsAgencies	News Agencies	Scrape various news agencies for particular keywords and extract titles, images, dates and full text.
NodeXL	https://www.smrfoundation.org/nodexl/	Twitter, Facebook, Youtube, Flickr	collect, analyse and visualize complex social networks
Seealsology	http://tools.medialab.sciences-po.fr/seealsology/	Wikipedia	explore in a quick and dirty way the semantic area related to any Wikipedia Page
Socilab	http://socilab.com/#home	LinkedIn	allows users to visualize and analyze their LinkedIn network
Tumblr	https://wiki.digitalmethods.net/Dmi/ToolTumblr	Tumblr	co-hashtag and post data tool for Tumblr
twarc	https://github.com/docnow/twarc	Twitter	a command line tool and Python library for archiving Twitter JSON data
Twitter Capture and Analysis Toolset (DMI-TCAT)	https://wiki.digitalmethods.net/Dmi/ToolDmiTcat	Twitter	Captures tweets and allows for multiple analyses (hashtags, mentions, users, search, ...)
Wikipedia Tools (6)	https://wiki.digitalmethods.net/Dmi/ToolDatabase	Wikipedia	Makes the images of all language versions of a Wikipedia article comparable; Scrape Wikipedia history and does IP to Geo for anonymous edits, Table of Contents for revisions

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			of a Wikipedia page and explore the results by moving a slider to browse across chronologically ordered TOC, categories of articles and the categories of related articles in different languages; Checks if the issues exist as a Wikipedia page, i.e., an article. If it exists it checks whether the organization is mentioned on that page; specify a range of Wikipedia revisions for use with the History Flow visualization;
YouTube Data Tools	https://wiki.digitalmethods.net/Dmi/ToolYouTubeDataTools	YouTube	A collection of simple tools for extracting data from the YouTube platform via the YouTube API v3.
Social Feed Manager	https://gwu-libraries.github.io/sfm-ui/		It's useful mainly for collecting data, and then exporting to CSV or JSON for analysis. Best for Twitter, also has Flickr and Tumblr options.
STACK	https://github.com/bitslabsyr/stack	Twitter	