Digital Methods SOS2920

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Course Description

An ever larger part of our time and our social and professional lives takes place on the internet. This goes for our love lifes, for our interaction with friends and acquaintances, for our participation in democratic and public debate - or in almost any other debate; it goes for our relation to the politicians we elect, our use of news media and our search for knowledge and information; just as it goes for our interests in fashion or cultural trends or virtually any other cultivation of interests, hobbies or political opinions.

Due to this increasing digitalization of social life, these communicative exchanges and interaction patterns are often retrievable and open to analysis with digital means. This opens up new social scientific and empirical possibilities, which a new field of *digital methods* seeks to exploit. This new field of digital methods - possessing its own degree of strengths and weaknesses - has begun to take shape *between* traditional quantitative and qualitative conceptions of method.

This course provides a basic introduction to the field of digital methods for undergraduate students. *It requires no coding or programming skills or prior experience with digital research tools*. It centers on hands-on exercises and mini-projects to explore the potential utility and versatility of a broad range of tools (e.g., for issue crawling and 'mapping', data scraping, text mining and visualizing data). The course teaches students to extract or 'scrape' text and interaction data from the Internet, including important social media platforms, and to visualise and analyse these data in novel ways and with novel means. *The course will considerably augment the student's range of means to access and analyse empirical material more generally*: it is meant to generate competences which can be of use to complement and nuance virtually any social scientific investigation (in tandem (or not) with traditional methods). The course also touches upon more theoretical aspects and discussions associated with digital sociology and the use of digital methods, including theories about how (social) media frames and informs interaction, about the relationship between the digital and the social, and about the ethical implications and problems of digital research. Yet, it focuses on the development of technical skills and upon gaining familiarity with the software tools introduced during the course.

Enrolled students should prepare for unavoidable frustrations with the software tools used in the course. The fast-changing reality of the Internet and the changing strategies of major web service providers such as Google and social media platforms like Facebook towards external researchers creates a number of difficulties.

IMPORTANT! All students need to commit to working in groups of 3-5 during the semester. If you are not prepared to engage in group work, this course is not for you. These groups will be formed by the instructors during the first month of the course, and barring exceptional circumstances, they will remain stable throughout the course. Importantly, *students will take their final exam in these groups (see below)*.

Learning Objectives
At the end of the course, students will
- Have experience with (freely accessible) software tools permitting extraction and analysis of interaction data and text from internet sites and important social media platforms
- Have knowledge about the distinct nature of digital research methods and how they differ from and may complement conventional methods (qualitative and quantitative)

- Be capable of reflecting on the ethical challenges associated with digital methods and develop responsible research strategies
- Have insight into the main theories as to how digital media and their designs perform social action and affect social experience online as well as more broadly
- Have gained acquaintance with the main themes of digital sociology and digital social science more generally

Number of lectures
The course entails 11 two-hour lectures and one workshop for student exam project development (without preparation).

Obligatory Coursework
There are two types of obligatory coursework.
1. Each student has to complete *one small individual homework assignment* in week 4 of the course. The assignment is graded pass/fail. **A pass is required to be admitted to the final exam.** The assignment can be retaken if the student does not pass the first attempt.
2. All students are required to attend the term paper preparation workshop, contribute to the collective development of an exam project, and participate in the group's work when carrying out the actual project.

In addition to the obligatory assignment, we will offer a number of voluntary small homework assignments, which are tied to specific lectures and support students' learning, especially the use of the software tools. These will be group assignments, i.e., they have to be completed by a group of students. All assignments are graded pass/fail. Students will engage in peer-assessments for some of these assignments - grading the work of other students in the class.

Software Installations
All students will have to install the following software tools on their personal laptops. We will provide some installation support during the first week of the course.
- Hyphe: - https://github.com/medialab/hyphe
- Help with Hyphe: https://www.gitmemory.com/issue/medialab/hyphe/408/834659305?fbclid=IwAR1kIKhdhotDA9Lfvw4ToAh2YlTYiajPmFHq1rdJgG3JyIcZKQ8y0J3DMpY
- Gephi: https://gephi.org/users/install/
- Excel or other spreadsheet program

Term Paper (plus obligatory preparation workshop)
Group Term Paper: The final evaluation will consist of a group project and term paper. To the extent possible, students will complete the term paper in the same groups they have worked in throughout the course. Group adjustments might be required, e.g., due to withdrawals or illness. Group compositions for the term paper will be posted on Canvas one week before the term paper writing period starts.

Project Description: Each group will collectively develop their term paper project (description) during the preparation workshop at the end of the semester (lecture 12). *Note that participation (physical presence) in the workshop is mandatory*. Each group will write a synopsis about their project (max 200 words) during the workshop. The synopsis of the group project must be approved by the instructors. The proposed project must meet the following criteria:

1. Apply at least one of the tools introduced in one of the lectures for data extraction from at least one Internet platform (e.g., Wikipedia, Twitter, Youtube) and/or traditional websites,
2. Include the use of network visualisation software (e.g., Gephi),
3. Use at least one of the text mining devices introduced during the course (e.g., Voyant Tools).
4. Discuss at least one theoretical and one ethical issue related to the project.
5. Contain a section [about 1000 words] on the findings/results of the analysis (in light of the research question).

Students will complete their previously approved project and *collaboratively draft a term paper* during a one-week period. The paper must adhere to the following limits: maximum 5000 words in a five-person group, +/- 500 words for each additional or missing group member. In addition, each group will fill out a group work form (available on Inspera), answering questions about their collaborative process. The form has to be attached to the collaborative paper; both documents have to be submitted as a single pdf file. Each term paper should have a cover page that lists the exam ID of all group members.

- *Logistics*: Students will have seven days to complete the group project. While each group writes a collective paper, each <u>individual</u> student has to submit their group's paper in Inspera by the deadline. In other words, multiple students will submit the same document. The term paper must contain three components: (1) cover sheet with all group member exam IDs, (2) collaborative paper, (3) group work form.
- *Grading*: UiO letter grading policies (A-F) apply. All members of a group will receive the same grade. Please note that individual appeals and complaints can result in a different grade for the appealing/complaining student - but that this change of grade (given to the appealing student) will not affect the grade of the other group members.

SCHEDULE AND SYLLABUS

1) Introduction and background (Bjørn and Manjana) - The lecture goes over the semester plan and introduces the basic ideas and goals of the course. It introduces the new field of digital methods and discusses how it diverges from conventional (qualitative and quantitative) methods. It introduces a number of foundational concepts such as online versus offline groundedness, natively (or 'born') digital traces versus the 'digitized', digital methods versus 'netnography', medium specificity etc..

The lecture also presents some of the main theoretical themes and discussions in digital sociology and Internet research more generally: the politics of algorithms and search engines, the development from the "information net" to the "social net", the increasing "platformization" of the internet, the privatization and capitalization of data and research etc.

Readings (to be read some time after the lecture):
- Rogers, preface (pp xi-xviii) and chapters 1, 2 (pp. 3-39, 36 pages)
- @Perriam, Jessamy; Birkbak, Andreas and Freeman, Andy (2019) Digital methods in a post-API environment, *International Journal of Social Research Methodology*, 23(3): 277-290. (13 pages) https://www-tandfonline-com.ezproxy.uio.no/doi/full/10.1080/13645579.2019.1682840
- @Marres, Noortje & Weltevrede, Esther (2013) Scraping the Social?, Journal of Cultural Economy, 6:3, 313-335. (22 pages) https://doi.org/10.1080/17530350.2013.772070
- @Rieder, Bernhard (2018) Facebook's app review and how independent research just got a lot harder, *The Politics Of Systems* blog (11th august). (ca 3 pages) http://thepoliticsofsystems.net/2018/08/facebooks-app-review-and-how-independent-research-just-got-a-lot-harder/
- @Birkbak, Andreas and Carlsen, Hjalmar (2016) The Public and Its Algorithms: Comparing and experimenting with calculated Publics, in Louise Amoore, Volha Piotukh (eds) Algorithmic Life: Calculative Devices in the Age of Big Data. Oxford, U.K: Routledge, pp. 21-34. (13 pages) https://vbn.aau.dk/ws/portalfiles/portal/284940213/2016_Algorithmic_Life_1st_Chap_1_Birkbak_and_Carlsen_The_Public_and_its_Algorithms.pdf
- @Jiang M. The business and politics of search engines (2014) A comparative study of Baidu and Google's search results of Internet events in China. New Media & Society. 16(2): 212-233. (21 pages) https://journals-sagepub-com.ezproxy.uio.no/doi/10.1177/1461444813481196
- @Bruns, A. (2019). After the 'APIcalypse': social media platforms and their fight against critical scholarly research. Information Communication and Society, 22(11), 1–23. (22 pages) https://doi.org/10.1080/1369118X.2019.1637447

2) Basic Digital Tools
The lecture presents some basic digital query services and web-based means for text analysis, such as the Google Word Cloud Generator, Google N-gram and the N-gram search application for books and journals in the national library.

Tools:
- Google N-gram: https://books.google.com/ngrams
- Google Word Cloud Generator: https://workspace.google.com/marketplace/app/word_cloud_generator/360115564222
- NB-N-gram: https://www.nb.no/sp_tjenester/beta/ngram_1/

Readings:

- Scheffer, M., van de Leemput, I., Weinans, E., & Bollen, J. (2021). The rise and fall of rationality in language. *Proceedings of the National Academy of Sciences*, *118*(51), e2107848118. (8 pages)

3) Mapping of issue spaces (Manjana)
The Internet has undergone a number of 'evolutionary steps', changing from a 'hyperspace' of connected websites to a space increasingly dominated by social media platforms. Looking at the early and continuous features of the Internet as a space in which actors present themselves on websites and connect with each other using hyperlinks, we explore ways to identify and map actor networks around specific issues. We practice building URL lists using the associative snowballing technique, and we use two tools - Hyphe and the Lippmannian Device - to study networks of websites and their content. This sets the foundations for a number of research approaches, including controversy analysis and historical issue tracing.

Tools:
- Google search engine https://www.google.no
- Hyphe, https://hyphe.medialab.sciences-po.fr/
- The Lippmannian Device, https://tools.digitalmethods.net/beta/lippmannianDevice/

Readings:
- Rogers, chapter 3 (pp. 43-57)
- @Ooghe-Tabanou, B., Jacomy, M., Girard, P., & Plique, G. (2018, October). Hyperlink is not dead!. In *Proceedings of the 2nd International Conference on Web Studies* (pp. 12-18). (6 pages) https://dl.acm.org/doi/abs/10.1145/3240431.3240434
- @Munk, A. (2014). Mapping wind energy controversies online: introduction to methods and datasets. Pages *Available at SSRN 2595287*. https://papers.ssrn.com/sol3/papers.cfm?abstract_id=2595287

Non-obligatory reading
- @Rogers, R., & Marres, N. (2000). Landscaping climate change: A mapping technique for understanding science and technology debates on the World Wide Web. *Public Understanding of Science*, *9*(2), 141. https://journals-sagepub-com.ezproxy.uio.no/doi/10.1088/0963-6625/9/2/304
- @Rogers R. Mapping and the Politics of Web Space. *Theory, Culture & Society*. 2012;29(4-5):193-219. https://journals.sagepub.com/doi/10.1177/0263276412450926

4) Wikipedia and Web Histories (Manjana)
In this session, we use Wikipedia to explore what kinds of research questions can be answered using a historical approach. We will identify digital traces of Wikipedia pages, explore how Wikipedia can be used to identify and trace over time important actors and topics related to an issue/controversy, and analyze a page history. Using the Internet Archive's Wayback Machine, we demonstrate how the historical approach can illuminate social changes over time (e.g., of institutions, organizations or the media) and the evolution of the web itself.

Tools:
- Seealsology, https://densitydesign.github.io/strumentalia-seealsology/
- Wikipedia page statistics
- Google Trends

- Wikipedia TOC Scraper, https://tools.digitalmethods.net/beta/wikitoc/, example: https://tools.digitalmethods.net/beta/wikitoc/?jobid=6139d537a8a2b&json=result&view=renderHtmlResults
- Internet Archive - Wayback Machine (Link Ripper), https://tools.digitalmethods.net/beta/internetArchiveWaybackMachineLinkRipper/
- Screenshot Generator, https://tools.digitalmethods.net/beta/screenshotGenerator

Videos:
- Jon Udell (2005), 'Heavy Metal Umlaut', https://jonudell.net/udell/gems/umlaut/umlaut.html ;
- Digital Methods Initiative, "Analyzing Wikipedia articles through the back-end" https://www.youtube.com/watch?v=tY7E8sXCAWw

Readings:
- Rogers, chapters 5 (pp. 87-106) and 7 (pp. 135-152)
- @Moats, D. (2019). Following the Fukushima Disaster on (and against) Wikipedia: A Methodological Note about STS Research and Online Platforms. *Science, Technology, & Human Values*, *44*(6), 938-964. https://journals-sagepub-com.ezproxy.uio.no/doi/10.1177/0162243918815234

Non-obligatory reading:
- @Arora, S. K., Li, Y., Youtie, J., & Shapira, P. (2016). Using the wayback machine to mine websites in the social sciences: a methodological resource. *Journal of the Association for Information Science and Technology*, *67*(8), 1904-1915. https://asistdl-onlinelibrary-wiley-com.ezproxy.uio.no/doi/full/10.1002/asi.23503● @Brügger, N. (2012). When the present web is later the past: Web historiography, digital history, and internet studies. *Historical Social Research/Historische Sozialforschung*, 102-117. https://www-jstor-org.ezproxy.uio.no/stable/41756477?seq=1#metadata_info_tab_contents
- @Harris, Beis, Shreffler. (2021). "The Internet Archive has been fighting for 25 years to keep what's on the web from disappearing - and you can help", The Conversation, August 13, 2021 https://theconversation.com/the-internet-archive-has-been-fighting-for-25-years-to-keep-whats-on-the-web-from-disappearing-and-you-can-help-163867

5) Gephi - Generating and Analyzing Networks (Bjørn)
The lecture provides an introduction to Gephi, a network analysis and visualisation tool, and some basic network analytic concepts.

Tools:
- Gephi: https://gephi.org/users/install/

Videos:
- Gephi I: https://www.youtube.com/watch?v=371n3Ye9vVo&t=680s
- Gephi: II: https://www.youtube.com/watch?v=SfneKHgEHNI&t=269s

Readings:
- Venturini, Tommaso, and Munk, Anders Kristian (2022) "Collecting and Curating Digital Records", "Visual Network Analysis", in *Controversy Mapping: A Field Guide*. Cambridge: Policy Press, chapter 6-7, 162-212. (50 pages)

- @Bastian, M., Heymann, S., & Jacomy, M. (2009). Gephi: An Open Source Software for Exploring and Manipulating Networks. *Proceedings of the International AAAI Conference on Web and Social Media*, *3*(1), 361-362. (11 pages) https://ojs.aaai.org/index.php/ICWSM/article/view/13937
- @Venturini, Tommaso, Jacomy, Mathieu & Jensen, Pablo (2020) What do we see when we look at networks: An introduction to visual network analysis and force-directed layouts, *Arxiv* 2019. (26 pages) https://arxiv.org/abs/1905.02202

6) YouTube (Bjørn)

This lecture introduces YouTube studies and some of the many analytical possibilities of the DMI YouTube Data Tools. The DMI tool entails a number of possibilities for extracting and investigating interaction and communication in and around shared content on YouTube. We shall have a look at how to expose 'channel' networks (YouTube 'channels' linking to each other) and video networks (users linking to the same videos) seeking to detect communities and political fractions on YouTube. Who watches certain popular videos, how do they comment, what other videos or channels do they share? Working with Jordan B. Peterson and the users of his 'anti-marxist´ or 'anti-identity-politics' videos, we shall investigate this network. Which Channels or users are important in distributing Perterson's content (and political views)? How do Petersons adherents and adversaries group? Which perspectives are present among which groups of users in the comments section (religious, political, economic etc.)? This way the lecture is meant to suggest how digital studies of YouTube can be used to investigate important communities and debates (e.g. rightwing issue mapping, but also trans-gender debates or the network of Norwegian 'influencers'). Again, the lecture and the analytical work will include the use of Gephi.

Tools:
- DMI's YouTube Tool: https://wiki.digitalmethods.net/Dmi/ToolYouTubeDataTools

Videos:
- Tool intro: https://www.youtube.com/watch?v=sbErTW2MzCY&list=PLKzQwIKtJvv9lwyYxh4708Nqo6YC6-YH4&index=12&t=4s
- Contrapoint on J.K Rowling and the Transgender debate: https://www.youtube.com/watch?v=7gDKbT_l2us&t=132s

Non-obligatory videos:
- Deep Fake Videos: https://www.youtube.com/watch?v=0k1q74MLU8k

Readings:
- Rogers: Chapter 12, project 20: pp. 249-259.
- @Rieder, Bernhard (2015) Introducing the YouTube Data Tools, *The Politics of Systems* blog (posted may 4th) (2 pages) http://thepoliticsofsystems.net/2015/05/exploring-youtube/
- @Couturier, Anna; Invernizzi, Michele; Jimenez, Carlos; Sanchez-Querubin, Natalia; Profeta, Giovanni and Werner, Nadine (2018) *YouTube as an archive for the end of life*. DMI Summer School project. (ca. 20 pages) https://digitalmethods.net/Dmi/SummerSchool2018YouTubeArchiveEndOfLife

7) Twitter (Bjørn)

This lecture introduces the TCAT tool (DMI) for Twitter analysis. It will walk the students through some of the many possibilities of the TCAT as to statistics and network analysis. The lecture will analyse the 'J.K. Rowlings trans-gender debate' on Twitter. It will demonstrate how to visualise this Twitter debate, how to mark out influential voices and references, to find diligent tweeters and trending hashtags, to detect communities or fractions in the debate, to investigate external sources for media and information important in the debate etc. The lecture will also recapitulate and expand the students' knowledge of Gephi (introduced in the intro-lecture).

This way the lecture seeks to prepare the students to analyse and visualise the collections of tweets gathered during the course (collections based on the queries suggested by the students at the twitter brainstorm in the introductory lecture).

Tools:
- DMI-TCAT (Twitter scraper) (access provided by the instructors)
- Gephi: https://gephi.org/users/install/

Videos:
- https://www.youtube.com/watch?v=_h2B2CA-btY (for the people of Iran)
- https://www.youtube.com/watch?v=ex97eoorUeo&t=1s (DMI-TCAT)
- https://www.youtube.com/watch?v=snPR8CwPld0 (Gephi tutorial for Twitter)
- https://www.youtube.com/watch?v=ngqWjgZudeE (Co-hashtag and Twitter)
- https://www.youtube.com/watch?v=7gDKbT_l2us&t=132s (Contrapoint on J.K Rowling and the Transgender debate)

Readings:
- Rogers, Chapter 8, project 12 and 13, chapter 10: pp. 153-177 and 203-222.
- @Borra, Erik and Rieder, Bernhard (2014) Programmed Method: Developing a Toolset for Capturing and Analyzing Tweets, *Aslib Proceedings* 66(3): 262-278. (24 pages) https://www-emerald-com.ezproxy.uio.no/insight/content/doi/10.1108/AJIM-09-2013-0094/full/pdf?title=programmed-method-developing-a-toolset-for-capturing-and-analyzing-tweets
- @Shepherd, Jack (2022) 22 Essential Twitter Statistics You Need to Know in 2022 (16. februar 2022), *The Shepard* (Blog). (10 pages) https://thesocialshepherd.com/blog/twitter-statistics

8) Reddit (Bjørn)
This lecture introduces the platform Reddit and the DMI analysis tool 4CAT. It will walk the students through some of the many possibilities of the 4CAT as to text and network analysis. The lecture will focus on one or more Reddit community (a so-called 'Subreddit'). Like the lecture on the TCAT (for Twitter analysis), the lecture on Reddit will demonstrate some of the many possibilities inherent to the 4CAT tool, including picture assembly functions, visualising of user and comment networks etc. Again, the lecture will also expand the students' capacities in Gephi.

Readings:
- @Sattleberg, William (2021) The Demographics Of Reddit: Who Uses The Site? Alphr (blog) (10 pages) https://www.alphr.com/demographics-reddit
- @Squirrell, Tim New Digital Methods Can be Used to Analyze Linguistic Terms and Better Understand Reddit Communities. LSE blog post. (10 pages)

https://blogs.lse.ac.uk/impactofsocialsciences/2017/08/02/new-digital-methods-can-be-used-to-analyse-linguistic-terms-and-better-understand-reddit-communities/

- @Massanari Adrienne (2017) #Gamergate and The Fappening: How Reddit's algorithm, governance, and culture support toxic technocultures. New Media & Society, 19(3): 329-346. (17 pages) https://journals-sagepub-com.ezproxy.uio.no/doi/10.1177/1461444815608807

Videos:

- 4CAT Tutorial - Creating a Dataset. https://www.youtube.com/watch?v=VZH9SQM3dmI&list=PLWukutaRyIn31H0uPfkYlmbWvo83PnXXo&index=1
- 4CAT Tutoral - Analysing a dataset using processors. https://www.youtube.com/watch?v=XIpGt3uzqNQ&list=PLWukutaRyIn31H0uPfkYlmbWvo83PnXXo&index=2

9) Text mining (Manjana)

In this session, we introduce the concept of text mining, explore different approaches to the collection and analysis of large bodies of text (incl. concordance and co-location analysis, corpus comparison, topic modeling), and review a set of tools for conducting these kinds of analysis. We will develop a text corpus and use the web-based platform Voyant Tools to analyze this corpus.

Tools:

- Voyant Tools - https://voyant-tools.org/
- N-grams

Videos:

- An Introduction to Topic Modeling: https://www.youtube.com/watch?v=IUAHUEy1V0Q&ab_channel=SummerInstituteinComputationalSocialScience

Readings:

- @Zanini, N., & Dhawan, V. (2015). Text Mining: An introduction to theory and some applications. *Research Matters*, *19*, 38-45. (7 pages)
- @John W. Mohr, Petko Bogdanov, Introduction—Topic models: What they are and why they matter, *Poetics*, Volume 41, Issue 6, 2013, pp. 545-569 (24 pages)

10) Semantic Networks and Sentiment Analysis (Manjana)

Building on lecture 7 on text mining, we learn about semantic networks. Using the online tool Valence, we will develop and compare semantic maps in small groups and discuss what kinds of research questions can be pursued with this approach. Further, we explore the study of emotion in text analysis, what is called sentiment analysis Starting with theoretical considerations of the role of 'sentiment' (emotions, affect) in language and social interaction, we explore how emotions can be studied online, and what might make this challenging, e.g., when your data consists of very short textual expressions, like those on most social media platforms. We conduct analog sentiment analysis using a Twitter data set developed for previous lectures and use Lingmotif and Sentiment Viz to compare the results of offline and digital methods.

Tools:

- Valence (Cognitive-affective mapping) https://valence.cascadeinstitute.org/
- https://monkeylearn.com/

Readings:
- @Kang, G. J., Ewing-Nelson, S. R., Mackey, L., Schlitt, J. T., Marathe, A., Abbas, K. M., & Swarup, S. (2017). Semantic network analysis of vaccine sentiment in online social media. *Vaccine*, *35*(29), 3621-3638.
- @Ceron, A., Curini, L., Iacus, S. M., & Porro, G. (2014). Every tweet counts? How sentiment analysis of social media can improve our knowledge of citizens' political preferences with an application to Italy and France. *New media & society*, *16*(2), 340-358.

Non-obligatory reading:
- @Drieger, P. (2013). Semantic network analysis as a method for visual text analytics. *Procedia-social and behavioral sciences*, *79*, 4-17.
- @Cambria, E., Das, D., Bandyopadhyay, S., & Feraco, A. (2017). Affective computing and sentiment analysis. In *A practical guide to sentiment analysis* (pp. 1-10). Springer, Cham. (available through UB)
- @Feldman, R. (2013). Techniques and applications for sentiment analysis. *Communications of the ACM*, *56*(4), 82-89.
- @Scrivens, R., Davies, G., & Frank, R. (2018). Searching for signs of extremism on the web: an introduction to Sentiment-based Identification of Radical Authors. *Behavioral sciences of terrorism and political aggression*, *10*(1), 39-59.

11) The Ethics of Digital Research & Outro (Bjørn & Manjana)
This lecture treats the many ethical issues connected to digital methods. Even though the SOS2920 course (and digital methods more generally) typically investigate data that users have themselves voluntarily 'posted' on open and publicly accessible digital venues – and that users often even have consented to the use of these data for research purposes – it still seems fair to assume that most users do not expect to be identified by researchers as the poster of this or that 'comment' made by them on a Facebook wall – in particular, not if made under resonant or agitated conditions. Users may forget the public nature of the platform in the heat of the moment; yet the internet does exactly the opposite: it remembers everything. The coming into being of digital platforms the public nature of which often illudes the informants dislocate the border between private and public, create new ethical discussions, new ethical pitfalls and needs for new ethical codes for research.
After the lecture on ethics we will *very shortly* recapitulate the course and the material covered. We will then evaluate the course with the students and discuss possible exam questions.

Readings:
- Rogers 203-216.
- @NESH (The National Committee for Research Ethics in the Social Sciences and the Humanities) 2019 (English Edition): *A Guide to Internet Research Ethics*. Oslo: De nasjonale forskningsetiske komiteene. (15 sider) https://www.forskningsetikk.no/en/guidelines/social-sciences-humanities-law-and-theology/a-guide-to-internet-research-ethics/
- @Markham, Annette and Buchanan, Elizabeth (2015) Ethical considerations in digital research contexts, *International Encyclopedia of the Social and Behavioral Sciences*, Vol. 12, Second Edition, Elsevier Press, pp. 606–613. (6 sider)

- https://www.researchgate.net/publication/313470218_'Ethical_considerations_in_digital_research_contexts'
- @Zimmer, Michael (2010) 'But the data is already public': On the ethics of research in Facebook, *Ethics and Information Technology*, 12(4):313-325. (12 sider)
https://link.springer.com/article/10.1007/s10676-010-9227-5
- @Joergensen, Rikke Frank (2014) The unbearable lightness of user consent, Internet Policy Review: Journal of Internet Regulation, 3(4): 1-14. (13 sider)
https://policyreview.info/articles/analysis/unbearable-lightness-user-consent

Videos:
- The AOL scandal: User 927's disturbing search history.
https://www.youtube.com/watch?v=iqjhGURJdTE

12) TERM PAPER PREPARATION WORKSHOP
This is a *whole day obligatory group workshop*. The workshop has two aims: producing more familiarity with the tools introduced during the course and collectively developing a group project for the term paper, including the formulation of a brief project description. The groups will work in-class with their proper ideas (and possible choices as to division of labor) towards the collective formulation of a term project. The instructors will be present to facilitate the work of the groups but there will be no lecturing.
Each group has to have its project synopsis approved to be allowed to turn in the term paper.

Readings (repeated from lecture 5):
- Venturini, Tommaso, and Munk, Anders Kristian (2022) "Collecting and Curating Digital Records", "Visual Network Analysis", in *Controversy Mapping: A Field Guide*. Cambridge: Policy Press, chapter 6-7, 162-212.