Case Study: Digitalization of contact tracing, in Norway

September 20, 2023

Ragnhild Bassøe Gundersen, HISP Centre, Department of Informatics

Case study

Is a detailed **examination** of **one example**, enabling the researcher to **close in on** an authentic situation and test different views in relation to **phenomena** as they evolve in practice (Flyvbjerg, 2006)

What is the problem?

- What is the problem?
  - The empirical problem
    - Lack of digital tools
  - The IS problem
    - Special sense of togetherness + loss of structure are key roles in the digitalization process



Aftenposten

Norge | Koronaviruset

Slik svikter Norges overvåking av pandemien. Viktige data kommer ikke inn.

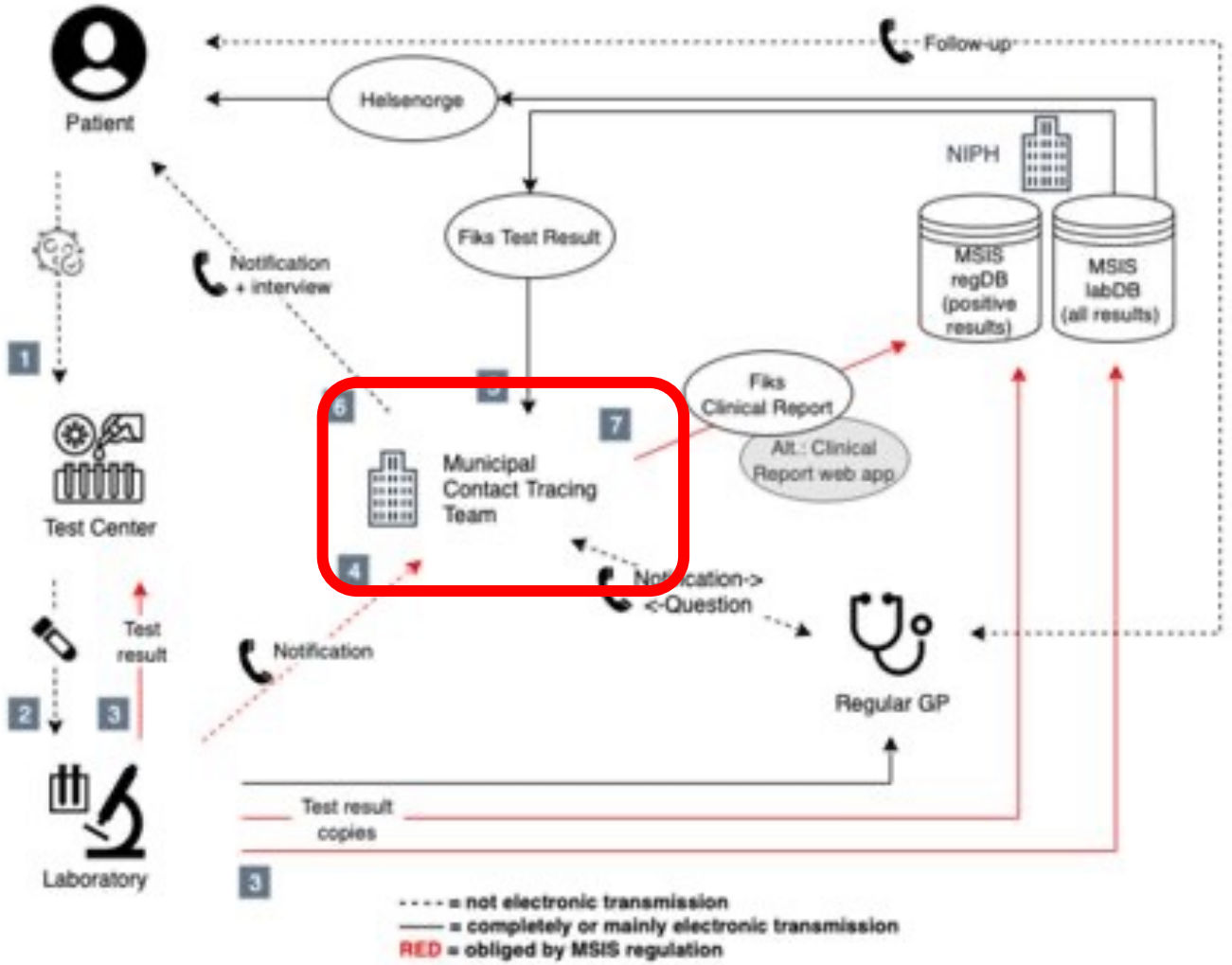
For tre av fire smittede i forrige uke aner ikke myndighetene i hvilket land de er smittet. Svake datasystemer svekker Norges innsats mot pandemien.

My epistemology

- Interpretive philosophical view of the world
  - Socially constructed
  - Inter-subjectively understood
- Hermeneutic approach
  - What actors said + how they interpreted what they said
- Processes and human behaviour related to the digitalization
- Thick Description
  - Why, What, How

(Walsham, 2006 ; Klein and Myers, 1999; Ritzer, 2000 ; Myers, 1997 ; Geertz and Darnton, 1973)

The contact tracing ecosystem



(Kvernevik, 2021)

Methods – How and Why

- Interviews
  - Semi-structured – introductory question - themes
- Focus group interviews
  - Heterogeneous group
- Obervations
  - One corona clinic
- Document studies

Phase	Date	Type of data collection	Online / In person
1	Winter 2021 – Summer 2021	Interviews	Online
2	Fall 2021 – Winter 2021	Observations Interviews	In person
3	Winter 2021 – Spring 2022	Interviews Focus group 1	Online
4	Spring 2022 – Summer 2023	Interviews Focus group 2	In person

Data What

- Interviews
- Observations
- Documents
  - Reports
  - Publicly available documents
  - From the interviewees

Choice of case - Why

- Convenience
- Snowballing



Photo credited hippopx.com

Triangulation of

- Methods
- Data
- Researchers
- Theory

Use of Theory

- Inductive: Codes and themes
- Deductive: Institutional theory
- Inductive: “What is this a case of?”
- Deductive: Liminality theory

(Burton-Jones et al., 2020 ; Gundersen et al., 2020 ; Mergel et al, 2019 ; van Gennep, 1909 ; Turner, 1969 ;)

Liminal innovation during a crisis

- Drawing on specific implications
- Contributions to deep insights

(Mertens, 2018 ; Orlikowski and Scott, 2021 ; Gundersen et al., 2022)

Styles of involvement and positionality

- Outside observer
- But:
  - Actors' expectations:
    - Member of HISP Oslo
  - My own experiences in health care

References

- Burton-Jones, Andrew, Saeed Akhlaghpour, Stephen Ayre, Payal Barde, Andrew Staib, and Clair Sullivan. “Changing the Conversation on Evaluating Digital Transformation in Healthcare: Insights from an Institutional Analysis.” Information and Organization 30, no. 1 (March 1, 2020): 100255. https://doi.org/10.1016/j.infoandorg.2019.100255.
- Flyvbjerg, Bent. “Five Misunderstandings About Case-Study Research.” Qualitative Inquiry 12, no. 2 (April 2006): 219–45. https://doi.org/10.1177/1077800405284363.
- Geertz, Clifford, and Robert Darnton. “Thich Description: Toward and Interpretive Theory of Culture.” In The Interpretation of Cultures. Unitet States: Basic Books, 1973. https://philpapers.org/archive/GEETTD.pdf.
- Gennep, Arnold van. “Arnold van Gennep.” In Store norske leksikon, July 21, 2020. http://snl.no/Arnold_van_Gennep.
- Gundersen, Ragnhild Bassøe, Vetle Utvik, Anne Thorseng, Johan Sæbø, and Petter Nielsen. *An Institutional Analysis of Digital Transformation of Covid-19 Contact Tracing During a Pandemic*, 2021.
- Gundersen, Ragnhild, Brian Nicholson, Johan Sæbø, and Petter Nielsen. “The Interplay Between Communitas and Anti-Structure in Liminal Innovation.” ECIS 2023 Research Papers, May 11, 2023. https://aisel.aisnet.org/ecis2023_rp/339.
- Klein, Heinz K., and Michael D. Myers. “A Set of Principles for Conducting and Evaluating Interpretive Field Studies in Information Systems.” MIS Quarterly 23, no. 1 (1999): 67–93. https://doi.org/10.2307/249410.
- Kvernevik, Bendik Sem. “Integrating Contact Tracing into Norway’s Complex Health Information Ecosystem.” University of Oslo, 2021. duo.uio.no. https://www.duo.uio.no/bitstream/handle/10852/88549/Master_thesis_Bendik_Sem_Kvernevik_FINAL.pdf?sequence=1&isAllowed=y.
- Mergel, Ines, Noella Edelmann, and Nathalie Haug. “Defining Digital Transformation: Results from Expert Interviews.” Government Information Quarterly 36, no. 4 (October 2019): 101385. https://doi.org/10.1016/j.giq.2019.06.002.
- Mertens, Mayli. “Liminal Innovation Practices: Questioning Three Common Assumptions in Responsible Innovation.” Journal of Responsible Innovation 5, no. 3 (September 2, 2018): 280–98. https://doi.org/10.1080/23299460.2018.1495031.
- Myers, Michael D. “Qualitative Research in Information Systems.” *MIS Quarterly* 21, no. 2 (1997): 241–42.
- Orlikowski, Wanda J., and Susan V. Scott. “Liminal Innovation in Practice: Understanding the Reconfiguration of Digital Work in Crisis.” Information and Organization 31, no. 1 (March 1, 2021): 100336. https://doi.org/10.1016/j.infoandorg.2021.100336.
- Ritzer, George. *Sociological Theory*. 5th ed. Singapore: McGraw-Hill Companies House, 2000.
- Turner, Victor, Roger D. Abrahams, and Alfred Harris. The Ritual Process: Structure and Anti-Structure. Somerset, UNITED STATES: Taylor & Francis Group, 1969. http://ebookcentral.proquest.com/lib/oslo/detail.action?docID=4906720.
- Walsham, Geoff. “Doing Interpretive Research.” European Journal of Information Systems 15, no. 3 (June 2006): 320–30. https://doi.org/10.1057/palgrave.ejis.3000589.

Thank you ☺