Software-as-process: Reflecting on the use of network-, process- and discourse-based research artefacts

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Feminist ethics of care in the software design and use

From 'matters of concern' to 'matters of care'

- Maintaining doings
- Continuing
- Repairing

(Puig de la Bellacasa 2011, 2017)

"[A]n analytic shift towards thinking in terms of ‘care arrangements’ [...], where care is not only seen from a bodywork perspective [...] but from a broader perspective [...] where care-work appears as distributed amongst people and things and where ‘delegations’ [...] of tasks to things are also noted." (Criado and Rodríguez-Giralt 2016:212–3, emphasis added)
“[S]ense-making is only disrupted when there is a controversy or breakdown, during which time we are made aware of the implications of a particular configuration or performance of sociomateriality.”  
(Orlikowski & Scott 2008: 32, emphasis added)

Research problem & goal

How does the concept of care arrangements help to overcome the methodological challenge of studying sociotechnical systems through breakdowns in an “after-the-fact” (Langley & Tsoukas 2016: 9) empirical examination?

Our goal was to examine schools’ care arrangements and to reflect upon how discourse-, network and process-based research artefacts craft different arrangements during the research process.
DATAFIED project: DATA In and For EDucation

- Interviews with human stakeholders: school staff, software developers in the responsible federal states' Ministries of Education
- Information systems documentation analysis and modelling, mapping
- Datasets documentation analysis
- Political, legal documentation analysis
Research questions

1) How are practices of care-work **afforded** in the school information systems (SIS)?

2) How are practices of care-work **constrained** in the SIS?

3) Which practices of care-work are **required** through the use of particular SIS?
1) SIS affordances for care-work

„I just wanted to say that [our SIS] has a charme to show me as tutor that a pupil has failed to meet the deadline for calling in sick. [...] And then there is a question, can I excuse the pupil, have I as his tutor already recorded that he is excused or is he still missing?"

“The pupil would call the school secretary, or someone would call for them that they are sick or wouldn’t come. Then you know you are waiting for an excuse. And then, if you notice it is always the seventh, eighth class, or it is always the first, second class then you’ll become attentive, who we are talking about, then you know the pupil. [...] You see there [in the SIS] the classes per day and and little orange question marks. And you can make them green or red.”

(School management member, tutor)
1) **SIS affordances** create boundaries for who or what is being (not) cared about and by whom.
2) SIS constraint for care-work

Regular updates of legal forms (e.g. consent forms for parents)

Obligation to forward all updates

Federal State Ministry of Education

School (represented via Principal, Secretary)

School staff

School administration infrastructure
2) SIS constraint for care-work

- Regular updates of legal forms (e.g. consent forms for parents)
- Obligation to forward all updates
- Mirroring part of school data platform for staff members
1) **SIS affordances** create boundaries for who or what is being (not) cared about and by whom.

2) **SIS constraints** open up ‘antagonist' spaces for different modes of care, distributed within the whole care arrangement and continuously re-configuring each other.
"In retrospect, linearized [...] stories are told." (Deuten & Rip 2000: 69)
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Educational software as a 'matter of care'

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2) SIS constraints open up ‘antagonist' spaces for different modes of care, distributed within the whole care arrangement and continuously re-configuring each other.

3) **SIS require caring for data**: Exploring software-as-process as a 'matter of care' adds new modes of care 'passed on' between human and non-human stakeholders.
Thank you!

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