Social Studies of Digital Science

Block Seminar (08.04.2022, 22.-23.04.2022, 20.-21.05.2022)
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Overview

For more than 50 years, social studies of science have provided us with empirically grounded accounts of science as mundane and everyday work. However, since the first ethnographers ventured into research laboratories, the nature of scientific work has changed in many ways. Attempts to capture and analyze these changes have been made through labels like the "bureaucratization", "marketization", or "internationalization" of science. The starting point for this seminar is the attempt to make sense of recent changes in scientific work through the notion of "digitalization". From here the seminar pursues two main goals. First, we will engage with contemporary research on digitally mediated aspects of scientific work. The aspects we cover include the role of digital data, infrastructures and genres of scientific output. We will also discuss new regimes of evaluating scientific work among peers and communicating scientific knowledge in broader digital publics. Second, we will discuss to what extent the established methods and analytic concepts of the field can help us understand digital science— and in what regards an update might be necessary.

This seminar is divided in one virtual kickoff session and two in person blocks. There are no mandatory readings for the kickoff session. However, there is a fair number of mandatory readings in preparation for each of the two in person blocks. There is plenty of time between the sessions to read, but I recommend that you plan ahead your reading. The readings will be made available via *Lernraum*.

	Date	Topic	Time	Place
1	Friday, 08.04.2022	Kickoff	10:00-12:00	online via Zoom
2	Friday, 22.04.2022	Digital and open science	12:00-19:00	see eKVV
3	Saturday, 23.04.2022	Publishers and archives	10:00-18:00	see eKVV
4	Friday, 20.05.2022	Infrastructure and platforms	12:00-19:00	see eKVV
5	Saturday, 21.05.2022	Methods and sensibilities	10:00-18:00	see eKVV

Certificate of participation (*Studienleistung*)

To get a certificate of participation for this seminar, you are required to regularly attend the seminar, actively participate in the discussions and to submit two literature protocols (upper limit: 1 Din A4 page, ½ page summary and ½ page open questions, criticism, remarks). Choose one mandatory reading from each block. Please upload the literature protocols to *Lernraum* until 11pm on Thursday 21.04. and Thursday 19.05. respectively.

Certificate of examination (*Prüfungsleistung*)

To get a certificate of examination for this seminar, you are required to write a term paper (*Hausarbeit*) related to the topic of this seminar (upper limit: 6000 words). Condition for the acceptance of the term paper is a prior agreement of the topic and the question with the lecturer. Please send the term paper as a PDF document to maximilian.heimstaedt@uni-bielefeld.de. There is no specific submission date, but I advise a submission no later than 31.09.2022.

Detailed plan of the sessions

Friday, 08.04.2022, 10:00-12:00 (Online, via Zoom)

We use this virtual kickoff session for a round of introductions and to familiarize ourselves with the topic, goals, and procedures of the seminar. In particular we use this first session to develop a baseline understanding of the field of social studies of science. Where does it come from? What is it up to? What are its boundaries? There are no mandatory readings for this session.

Friday, 22.04.2022, 12:00-19:00, (Room: see eKVV)

We use this first in person session to discuss whether it is actually helpful to describe changes in the nature of scientific work through the label "digitalization". What aspects of scientific work become available for analysis through this label? What aspects remain unseen? We also discuss what "openness" means in relation to science and in what regards it overlaps with digitalization.

Mandatory readings:

Slot 1 (12:00-13:30)

Armstrong, D. (2019). The social life of data points: Antecedents of digital technologies. *Social Studies of Science*, *49*(1), 102-117.

Slot 2 (14:00-15:30)

Leonelli, S. (2014). What difference does quantity make? On the epistemology of Big Data in biology. *Big Data & Society*, *1*(1).

Slot 3 (16:00-17:30)

Mirowski, P. (2018). The future (s) of open science. *Social Studies of Science*, *48*(2), 171-203.

Saturday, 23.04.2022, 10:00-18:00 (Room: see eKVV)

We use this second session to dive deep into the ongoing transformation of academic publishing. We learn about the recent transition from subscription-based business models to open access business models. In particular, we zoom in on the enabling roles of shadow libraries in this process. Subsequently, we will learn about the role of preprint servers in scientific work and the intricate forms of sorting, sifting and filtering that are performed on their backstage. We will also discuss the link between preprint-servers and the spread of misinformation online.

Mandatory readings:

<u>Slot 1 (10:00-11:30)</u>

Dobusch, L., & Heimstädt, M. (2021). The structural transformation of the scientific public sphere: Constitution and consequences of the path towards Open Access. (Weizenbaum Series, 6). Berlin: *Weizenbaum Institute for the Networked Society - The German Internet Institute*.

<u>Slot 2 (12:30-14:00)</u>

Bacevic, J., & Muellerleile, C. (2018). The moral economy of open access. *European Journal of Social Theory*, *21*(2), 169-188.

<u>Slot 3 (14:30-16:00)</u>

Reyes-Galindo, L. (2016). Automating the Horae: Boundary-work in the age of computers. *Social Studies of Science*, *46*(4), 586-606.

<u>Slot 4 (16:30-18:00)</u>

Bauer, M, Heimstädt, M., Franzreb, C., Schimmler, S. (2021). Clickbait or conspiracy? How Twitter users address the epistemic uncertainty of a controversial preprint. *Working Paper.*

Friday, 20.05.2022, 12:00-19:00 (Room: see eKVV)

We use this third session to explore some of the new digital infrastructures and platforms that media aspects of scientific work. We discuss the benefits and risks of data sharing platforms in science, as well as the role of Wikipedia for scientific work. One part of this session will be a guest lecture by Sebastian Koth (Weizenbaum Institute, Berlin) who will report from his ethnographic research of a community that develops a "blockchain for science".

Mandatory readings:

<u>Slot 1 (12:00-13:30)</u>

Plantin, J. C., Lagoze, C., & Edwards, P. N. (2018). Re-integrating scholarly infrastructure: The ambiguous role of data sharing platforms. *Big Data & Society*, *5*(1).

<u>Slot 2 (14:00-15:30)</u>

Ford, H., & Wajcman, J. (2017). 'Anyone can edit', not everyone does: Wikipedia's infrastructure and the gender gap. *Social Studies of Science*, *47*(4), 511-527.

<u>Slot 3 (16:00-17:30)</u>

Guest lecture by Sebastian Koth

Saturday, 21.05.2022, 10:00-18:00 (Room: see eKVV)

In this fourth session we discuss whether the established methods and analytic sensibilities in the social studies of science need a digital update. We will engage with the influential notion of "digital sociology", engage critically with the methodological imperative of computational social sciences, and discuss whether digitally mediated citizen science has the potential to change knowledge production.

Mandatory readings:

Slot 1 (10:00-11:30)

Marres, N. (2015). Why map issues? On controversy analysis as a digital method. *Science, Technology, & Human Values*, *40*(5), 655-686.

Slot 2 (12:30-14:00)

Törnberg, P., & Uitermark, J. (2021). For a heterodox computational social science. *Big Data & Society*, *8*(2).

Slot 3 (14:30-16:00)

Baudry, J., Tancoigne, É., & Strasser, B. J. (2021). Turning crowds into communities: The collectives of online citizen science. *Social Studies of Science.*

Slot 4 (16:30-18:00)

Closing discussion and feedback.