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Rethinking Algorithm/AI Studies

The ontological and epistemological challenges of researching algorithms and the case for renewing ethnomethodology

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Abstract

If media have been studied in three aspects of production, media text and reception, algorithms have now become the de facto media text of digital platforms.

Ontologically, three features of algorithms complicate researching them:

Hyper-modulation: Algorithms do not have a fixed textuality; Invisibility: They are infrastructural and thus invisible to users; Inextricability: They are interwoven with one another, with platforms' core code, and with user data.

Given the distinct and disruptive ontology of algorithms and challenges of a positivist epistemology, this paper proposes a pragmatist epistemology and thereby a conceptual model (Figure 1) which views platforms as two core intertwined processes: datafication and personalization.

Platform figuration			
(Present) Datafication		*(Future)* Personalization	
Surveillance	Categorization	Prediction	Fragmentation
Life→Digits (Data)	*Data→Data*	*Data→Other Data*	*Digits→Life*

Figure 1 – Proposed model for platform figuration and its embedded processes

Datafication consists of surveillance and categorization and is oriented to the present time. Surveillance links human life to digits, resulting in a modulating relation which can be called life-digits or data. Categorization is linking these life-digits (data) to each other.

Personalization is oriented to the near future and consists of two sub-processes of prediction and allocation. Prediction is a re-categorization toward the future; it is a speculative reconfiguration of the links between life-digits, or data relations based on the existing categories. Allocation is a future-oriented reversal of surveillance, a process in which predictions (which are themselves relations between data relations) are disentangled down toward life qualities.

This cyclic model of platforms calls for different research methods. Given how platforms have become infrastructures of sociality, the paper proposes a renewal of ethnomethodological breaching experiments that disrupt the platforms' personalized affordances to make them visible.

For instance, in my current research project on the domestication of algorithmic listening on Spotify, I have asked my participants to use Spotify accounts of other unknown people for a few weeks before they are allowed to use their own accounts again. In each phase I'm interviewing them (coupled with walkthrough method) about their experiences and practices, particularly those that have become visible through the experiment.