

Human after Data: Data Intermediaries for Personal Data Governance

August Bourgeus

Supervisors:

Prof. An Jacobs, PhD (Vrije Universiteit Brussel)

Prof. Laurens Vandercruysse, PhD (Vrije Universiteit Brussel)

Prof. Nanouk Verhulst, PhD (Vrije Universiteit Brussel)

Abstract

Across contemporary digital systems, consent has become the default justification for pervasive data processing. Personal data is collected, processed and shared often with a limited understanding of the people it is about. The resulting flows are increasingly opaque, difficult to contest, and shaped by the power of large technology companies. It has become almost impossible for citizens to effectively manage the processing of their personal data in a way that results in real control. Imagine that you could delegate some of this management to trusted data intermediaries, who could assist you in managing your personal data.

This dissertation examines how personal data ecosystems can be shaped to enable contextually appropriate personal data sharing, focusing on the role of data intermediaries through the lens of Contextual Integrity (CI). It does so by combining CI's emphasis on context-specific, appropriate data sharing with an empirical programme spanning four studies. First, it investigates Personal Data Stores (PDS) and shows that prevailing tools primarily provide data-sharing and control affordances and risk having additional decision burdens rather than enabling practical empowerment. Second, a vignette study with citizens in the wearables context demonstrates that perceived appropriateness is strongly conditioned by contextual parameters, with purpose emerging as a dominant driver. Third, a mobility vignette study extends CI by evaluating the appropriateness of proxy decision-making. While individual control is rated highest overall, selective delegation to data intermediaries is deemed more appropriate under public-interest purposes and when access is time-bounded and explicitly revocable. Fourth, an interview study in the Flemish digital advertising ecosystem analyses how organisational stakeholders justify

current data practices and how they anticipate a data intermediary tool would affect appropriateness and operational routines.

Together, these studies motivate a hybrid model in which part of data processing decision-making remains with data subjects, while other parts (particularly routine or clearly public-interest flows) may be delegated to neutral intermediaries under narrow purposes and fixed-duration, revocable permissions. Citizens prefer to have control over their personal data, but the results indicate that data intermediaries could offer a promising approach to assist citizens and address some of the longstanding issues with personal data management. The dissertation also specifies concrete governance conditions that would enable intermediaries to play this role credibly, including independence from dominant platforms, transparent rule-setting, and enforceable accountability. As data ecosystems move toward more automated decision-making and increased use of Artificial Intelligence (AI), these findings provide insights for designing and evaluating intermediaries that strengthen meaningful agency and protect citizens' fundamental right to privacy while keeping data practices aligned with contextual norms.