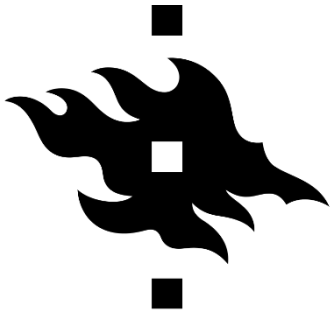

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Algorithmic governance in public sector

Алгоритмы в государственном управлении

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Digital Russia Studies

We focus on the digital transformation of state and society in Russia and beyond using the methods of digital humanities.

https://blogs.helsinki.fi/digital-russia-studies/projects

Algorithmic governance in public sector

How and under which conditions the uptake of algorithmic governance affects effectiveness, efficiency and democratic quality of public governance?

Algorithmic governance

- Governance = a process of coordinating social interactions aimed at addressing collective action problems (Jessop, 1998).

- Algorithms = encoded procedures for solving a problem by transforming input data into a desired output (King, 2017)

- Algorithmic governance (AG) is defined as a mode of societal coordination enabled by the relatively autonomous functioning of algorithm-driven technologies (Gritsenko and Wood, forthcoming).

Gritsenko and Wood (forthcoming)

Comparing modes of governance

	Hierarchy	Market	Network	Algorithm
Key mechanism	Formal rules (regulation)	Price	Relations	Program (code)
Medium	Routines	Money	Reputation	Data
Advantage	Reduce uncertainty	Flexibility	Dynamism	Efficiency
Disadvantage	Stiff, rigid	Externality	Implementation gap (?)	Opacity

Main features, advantages and disadvantages of using each of the four modes of governance for collective problem-solving.

Case: Air pollution

- Hierarchy: a standard (how much SOx can be emitted) and a fine for those who transgress the rule.

→Vehicle emission standards – diesel ban (Germany).

- Market: MBIs and voluntary private standards, no prosecution of violators (reputational costs?).

→Vehicle emission standards – progressive emission tax (Finland).

Network: community projects (e.g., networks of low-cost sensors) and incentives for behavioral change + educational effects.

→ Incentives to change behavior (e.g., cycling) at the local level.

Case: Air pollution

Algorithm: for instance, congestion pricing scheme (NRT monitoring and dynamic pricing).

Governance mix: hierarchy (framework, such as Clean Air Act) + market (tax/CSR/Google monitoring project) + network (community sensor network) + algorithms (NRT monitoring).

Effectiveness & efficiency

- Problem-solving capacity (come up with a solution that works),
- Performance/implementation capacity (implement this solution to get results),
- Cost-effectiveness (do it in an affordable manner).

Democratic quality

- Transparency (do it in a manner that everyone knows what is going on),
- Accountability (provide avenues for holding those in power accountable).

Summary

- AG at its best could be an adaptive experimental governance.
- But at its worst it is an opaque and rigid regulatory system that needs H, M and N to perform effectively in a mix.
- Hence, we shall be looking into the unique advantages of AG and how can they be seized without undermining the advantages of other governance modes.

Thank you!

Questions?

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