

When Government Uses AI: Experimental Evidence of Selective Trust Decline and Algorithmic Nimbyism

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Abstract

Artificial intelligence is increasingly being used in government, changing the ways in which citizens relate to public institutions. One important aspect, the impact of AI on trust in public institutions, has been the subject of substantial efforts that document an "AI penalty" on trust in public institutions when they use AI. However, little is known about *why* or *how* such a penalty arises. In two preregistered survey experiments (N=6,084) we measure the effect of AI on trust, across four real-life use cases of governmental AI. First, we find large differences across the four domains - disclosing AI usage in social services and health care settings decreases trust, while trust is unaffected for policing and unemployment use cases. Second, we experimentally test a specific mechanism (algorithmic nimbyism) that considers personal exposure to the decision-making outcomes as a driver of the negative impact of AI on trust – inspired by the Not In My Back Yard-phenomenon. Despite not finding any causal evidence for the notion of algorithmic nimbyism, we used rich administrative data on survey participants' medical history and labor force participation to explore heterogeneous treatment effects that revealed descriptive and suggestive evidence of algorithmic nimbyism. Future work could consider further exploring the combination of experimental and observational data to empirically examine explanations of the impact AI has on relations between citizens and public institutions.

Extended version —

osf.io/preprints/socarxiv/xrejw_v1

Preregistrations — osf.io/tup3d/overview and osf.io/8gwsq/overview

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