

1 INTRODUCTION

revising vs reinforcing?

algorithms don't **reflect** on the marginality of the cases they see. it doesn't understand the concept of the margin

- (1) (A) Digital systems mediate a lot of our lives that seem counterintuitive and contrary to our expectations (phenom). (dependencies: none)
 - (2) (B) Researchers have started thinking about these issues from various angles: the hegemonic power these systems have, the unfair and sometimes opaque power they wield over us, and the confusion of metrics for goals. (fatml/hci/comm/etc) but even if we did all these things right (designed inclusively, etc...), some agent would always have to make a decision about cases that it's never seen before (and will inevitably make a decision that's incorrect or counterintuitive) (include "fill in the gaps") (dependencies: A)
 - (3) (C) bureaucratic theory talks about street-level bureaucracies, the layer of bureaucratic organizations where people "fill in the gaps" — making crucial decisions about cases that haven't been spelled out already. (specifying the edges where points don't exist') (dependencies: B ("filling in the gaps"=="making decisions about novel cases"))
 - (4) (D) These decisions are enormously consequential, because they effectively **become** policy (dependencies: C (filling in the gaps=>making policy))
 - (5) (E) there are also "street-level algorithms". (also why relevant to HCI) (policy => execution; training data => testing data) (dependencies: C + A ("street-level"=>C, "algorithms" => A))
 - (6) (F) what's different about the two is how they specify the edges (algo pretrains and executes at scale (or not idc); SLBs find that policy as they go, and refine over time) (dynamically reconfiguring the edges they draw (maybe more like making sense of the thing they're seeing?)) (msb: execution is also articulation for the executor of the thing — when someone makes a decision about something, they're also articulating that **to themselves**; for an algo, articulation precedes execution) (in other words, people think about the decision they made (and why) after they've made it — algorithms don't (they just execute after they've been trained)) (dependencies: E, (need to explain that SLB revision is a new idea))
 - (7) (G) bureaucracies become self-correcting (or at least aware of the decision that needs to be made (**and scales?**)); algos does the same but without the awareness of policy being made (either at small or large scales) (dependencies: F + D)
A->B->C->D--- | |-->E->F->G |----/
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- (8) people and algorithms fill in gaps in different ways; how does this lead to different outcomes that people have been seeing in the beginning?
 - (9) something about SLAs is different from SLBs in an important way that affects the outcome
Bureaucrats fill in the gaps by reflecting on the underlying goals of their task
msb: what's interesting isn't how they fill in gaps that are well-circumscribed, but what they do with the ambiguous cases
ali: what's interesting to us isn't that they're exercising discretion (but hey, that's important too), but what motivates that (or something)
 - (10) In this paper, we'll show that algorithmic systems are taking up the roles of street-level bureaucrats, becoming "street-level algorithms", and show how this way of thinking about these systems can help inform the design of these systems.
 - (11) "Street-level algorithms" make decisions about myriad cases just like street-level bureaucrats, but unlike bureaucrats their decisions don't continually inform the ongoing revision of policy that bureaucrats engage in.