



Government by Algorithm

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Governance Task	Description	Prototypical Examples
prioritizing enforcement	help agency identify or prioritize enforcement targets	<ul style="list-style-type: none"> ▪ SEC, CMS, IRS predictive targeting tools ▪ CBP and TSA facial recognition tools
regulatory monitoring and analysis	inform agency policy-making and research	<ul style="list-style-type: none"> ▪ NOAA thunderstorm hazard prediction ▪ FDA analysis of adverse drug event data ▪ FCC analysis of rulemaking comments ▪ CFPB analysis of consumer complaints
supporting adjudication	aid agency adjudication of benefits, licenses, regulatory violations	<ul style="list-style-type: none"> ▪ SSA Insight System for correcting adjudicatory errors ▪ USPTO tools for adjudicating patent and trademark applications
citizen services and engagement	support provision of services to public or communication with public	<ul style="list-style-type: none"> ▪ USPS, HUD use of chatbots ▪ USPS autonomous vehicles project and handwriting recognition tool
internal agency and personnel management	aid agency resource allocation – managing employees, prioritizing work, procurement	<ul style="list-style-type: none"> ▪ HHS Accelerate tool to assist contracting officer procurement decisions

Case #1 – Enforcement
(and Legal Puzzles of AI)

Enforcement by Algorithm



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- Proceedings by a self-regulatory association.

Legal Puzzles



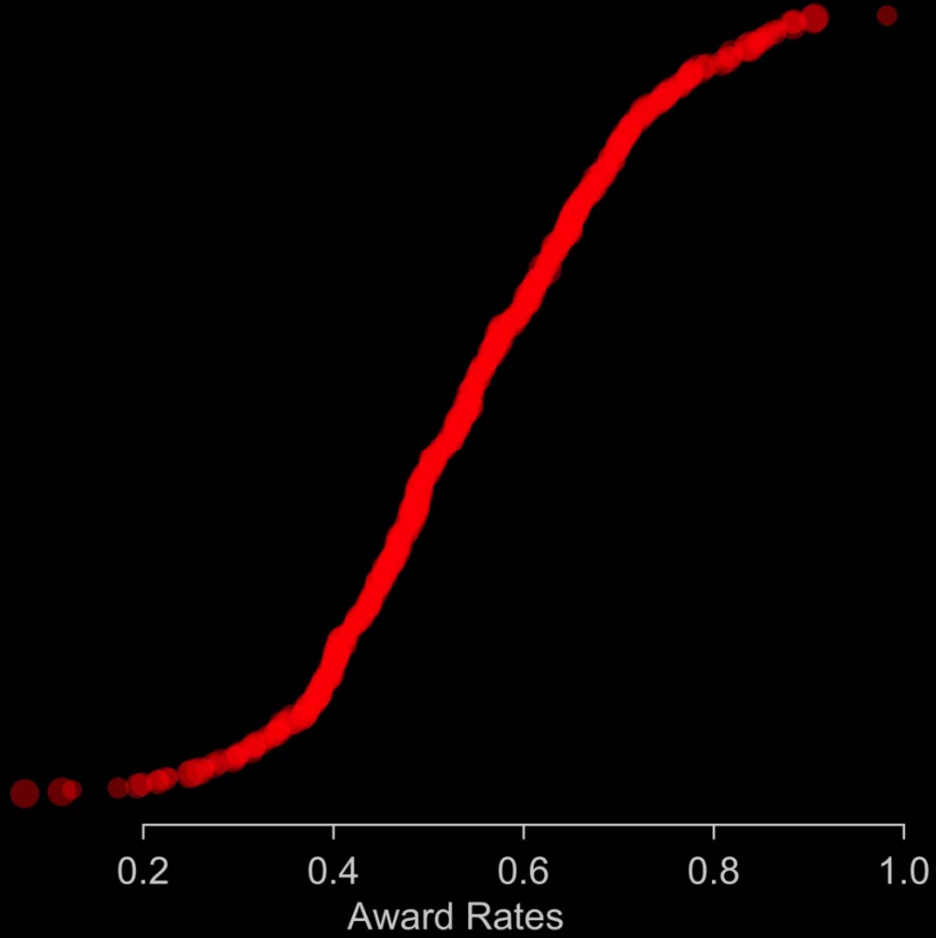
- Collision: legal reason-giving v. black boxes
- *Heckler* holds?
 - Reviewability concern = generalist judges, no “focal point”
 - Do algos make this worse or better?
- Transparency’s limits

Algos encode law, priorities
-- rebuts *Heckler*?
-- rules subject to N&C?

*Case #2 – Formal Adjudication
(and Capacity-Building Challenges)*



Judges in One Region







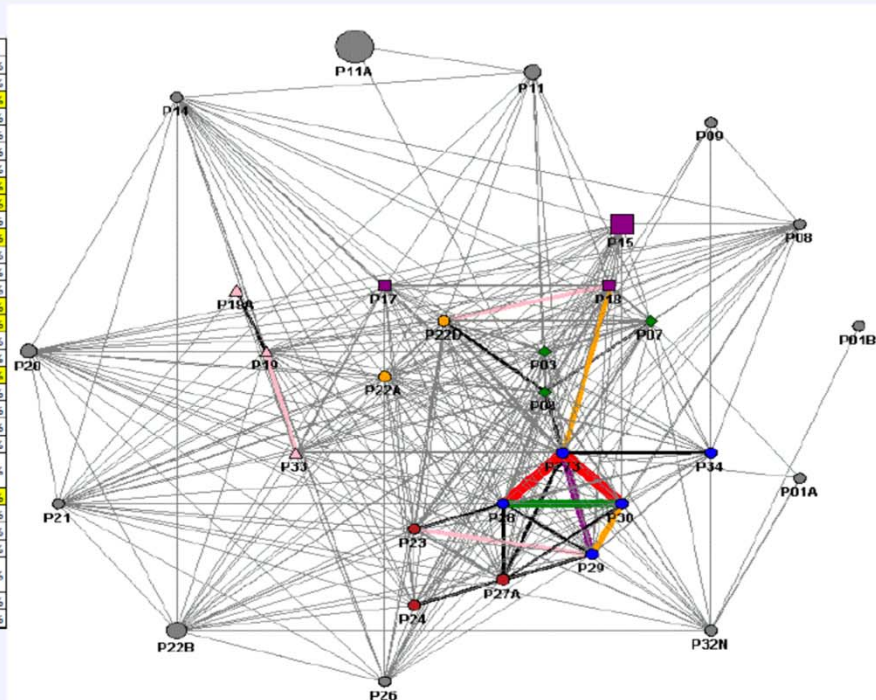
A Government Success Story:

Gerald K. Ray* and Jeffrey S. Lubbers**

The New
Lawyering

Possible Clusters of Pivotal Issues

Label	Pivotal Issue	Count	% Obs
P01A	1A. GC Est. for not FT2AC	1,604	1.4%
P01B	1B. GC NOT Est. for not FT2AC	1,251	1.1%
P03	3. Evidence issue	11,679	10.4%
P04	4. Error of law	4,488	4.0%
P07	7. General procedural	655	0.6%
P08	8. SGA Issue	6,559	5.8%
P09	9. DI Insured issue	5,990	5.3%
P11	11. New & Material Evi. Sub.	16,312	14.5%
P11A	11a. Any new evidence Sub.	36,588	32.5%
P14	14. Eval. of treat. source opin.	10,398	9.2%
P15	15. Eval. of other opinion	22,821	20.3%
P17	17. Claimant credibility (any)	6,364	5.7%
P18	18. 3rd party credibility	222	0.2%
P19	19. DA&A issue Corr. Act. Rec.	2,769	2.5%
P19A	19A. DA&A issue in case	12,479	11.1%
P20	20. S2 Not severe - Any	15,588	13.9%
P21	21. S3 MorE Listing - Any	7,886	7.0%
P22A	22A. RFC: Eval. Exert. Limits	8,070	7.2%
P22B	22B. RFC: Eval. non-exert. limit	18,772	16.7%
P22D	22D. RFC: Com. of imp./other	939	0.8%
P23	23. VE not obtained	1,115	1.0%
P24	24. VE Evidence deficient, etc.	6,086	5.4%
P26	26. S4 Eval of PRW	10,088	9.0%
P27B	27&31. S5 Treatment of age issue/borderline age issue	1,184	1.1%
P27A	27A. S5-med-voc issues - Any	12,636	11.2%
P28	28. S5-Misapp. of grid rules	1,025	0.9%
P29	29. S5-Misapp. of framework	2,354	2.1%
P30	30. S5-transferable skills	747	0.7%
P32N	32&32A. Closed period case needs correction - yes or no	1,087	1.0%
P33	33. Fail to follow presc.treat.	642	0.6%
P34	34. Step 5 education issue	2,200	2.0%



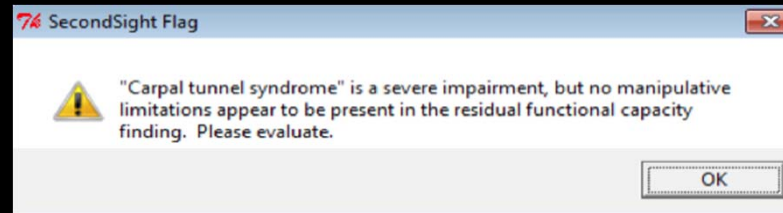


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NLP-based error detection (“Insight”)

The New
Lawyering



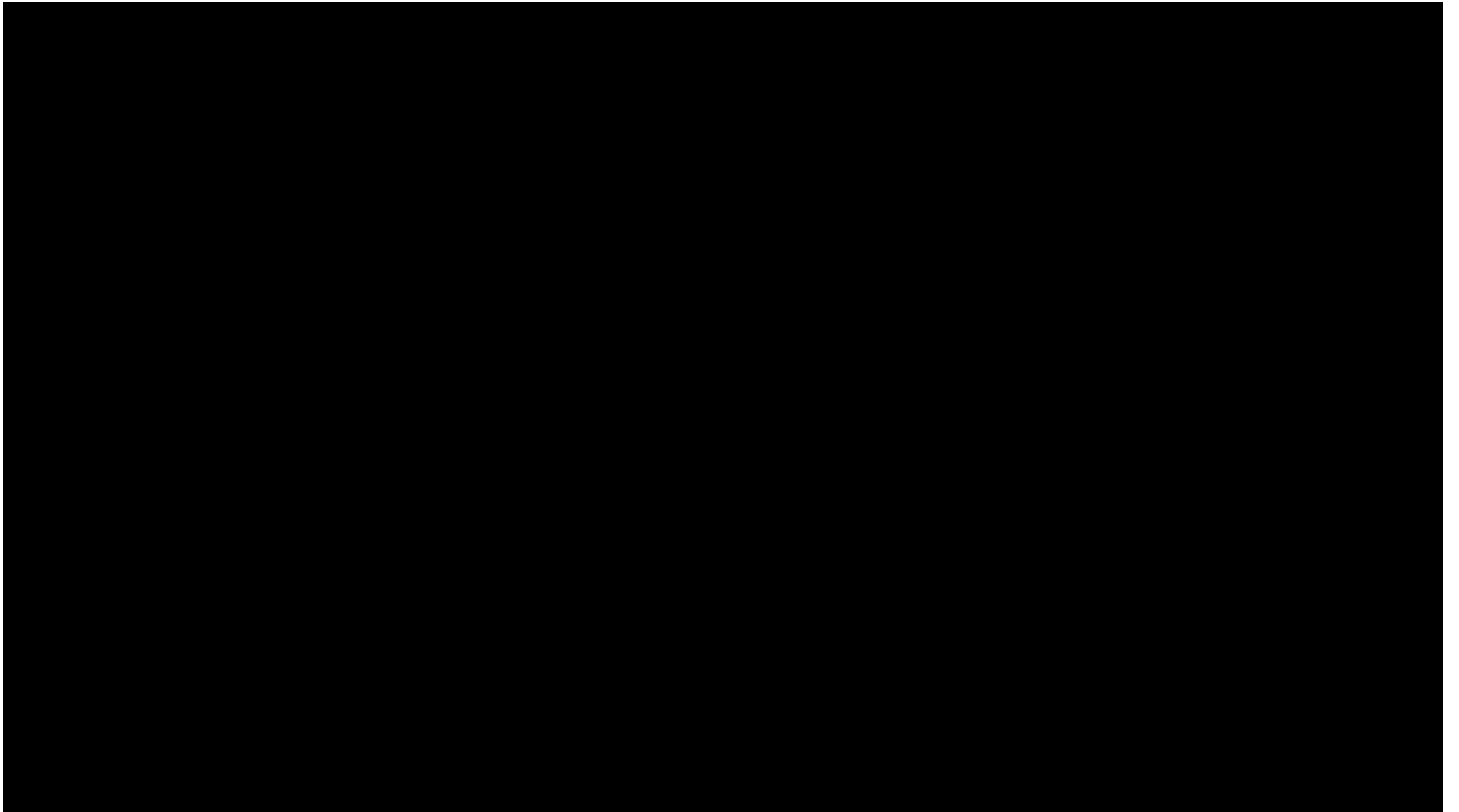
“Please evaluate.”

How Accountability?

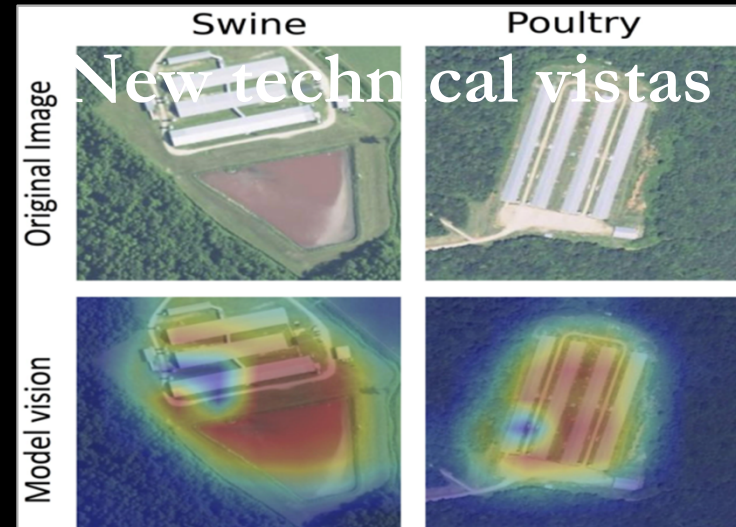


Benchmarking –
“human alongside
the loop”?

Q&A



Technical Challenges



Sky's the Limit?

GAO

United States Government Accountability Office

Testimony
Before the Subcommittee on Environment
and Hazardous Materials, Committee on
Energy and Commerce, House of
Representatives

For Release on Delivery
Expected at 10:00 a.m. EDT
Wednesday, September 24, 2008

CONCENTRATED ANIMAL FEEDING OPERATIONS

EPA Needs More Information and a Clearly Defined Strategy to Protect Air and Water Quality

Statement of Anu K. Mittal, Director
Natural Resources and Environment



GAO-08-1177T



nature
sustainability

