

AI-assisted risk assessment in investigative contexts: A study of analytical decision making

An experimental study examining human decision-making in AI-assisted counter-terrorism intelligence analysis using realistic case scenarios.

Key details

Lead institution	Brunel University
Principal researcher(s)	Desiree Marie Akue 2546342@brunel.ac.uk
Police region	London
Level of research	Masters
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Research context

[The recent launch of PoliceAI](#), a government backed national centre dedicated to scaling AI across all UK police forces, makes the question of how these tools affect human decision making more urgent than ever, regardless of where one stands on their deployment.

This study is conducted as a dissertation of an MSc in Crime Science, Investigation and Intelligence at Brunel University of London.

Intelligence professionals routinely make consequential decisions under conditions of uncertainty, incomplete information and time pressure. The introduction of AI-powered risk scoring tools into this environment has been framed as a means of enhancing objectivity and analytical consistency (Barkat and Busuioc, 2023). Yet the assumption that algorithmic assistance improves decision

quality, and preserves human accountability, remains empirically untested.

This study addresses two specific gaps in the existing literature. First, while automation bias is well documented in aviation and healthcare, experimental evidence from law enforcement and intelligence settings remains scarce. Second, and more fundamentally, no study has yet examined what happens to the analyst's felt sense of personal responsibility when an AI system appears to have already resolved the uncertainty. The EU AI Act (2024) places full legal accountability on the human operator, but legal accountability and felt accountability are not the same thing (Overman and Schillemans, 2022), and that distinction has never been measured empirically before.

Findings are intended to contribute empirical evidence to ongoing debates around AI governance in law enforcement, including those pursued by bodies such as Europol and Interpol, and to advance an interdisciplinary conversation across cognitive psychology, legal theory and criminology around the measurable psychological consequences of algorithmic decision support.

Research methodology

The study will be administered online via Jisc Online Surveys, an academic survey platform widely used across UK higher education institutions.

This study employs a controlled between-subjects online experiment with a 2x2 factorial design across five conditions. Participants will review a deliberately ambiguous counter terrorism vignette presented subsequently across three screens, mirroring real analyst workflows where information is rarely disclosed simultaneously.

The vignette presents five behavioural indicators (online search activity, financial behaviour, known associations, travel patterns and procurement activity) each counterbalanced by contextual neutral information offering plausible innocent explanations. No single indicator resolves the case, placing participants in a stage of genuine uncertainty before any AI input is introduced.

Participants in the control condition receive no AI input. Those in the four experimental conditions additionally view a simulated AI risk score with a percentage on both accuracy of the model and suggested action to take.

Partakers are then asked to briefly describe the reasoning that informed their decision.

The whole survey takes approximately 10 minutes.

Research participation

This study recruits any professionals currently working or with prior experience in law enforcement or intelligence roles. Any role involving decision making including, but not limited to intelligence analysts, investigators, fraud risk analysts, investigators, Senior Investigator Officers and counter terrorism professionals.

[Participate in the 10-minute survey](#)

A minimum of 120 valid responses is sought, with approximately 24 participants per experimental condition.

References

Alon-Barkat S and Busuioc M. (2023). 'Human–AI interactions in public sector decision making: “Automation bias” and “selective adherence” to algorithmic advice.' *Journal of Public Administration Research and Theory*, volume 33, issue 1, pages 153–169.

European Union (2024). AI Act. Accessible at: <https://eur-lex.europa.eu/eli/reg/2024/1689/oj/eng> (last accessed 20 July 2027).

Overman S and Schillemans T. (2022). 'Toward a public administration theory of felt accountability'. *Public Administration Review*, volume 82, issue 1, pages 12–22.