Response to the
Competition and
Markets Authority call
for information:
algorithms, competition
and consumer harm

Date:
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The Ada Lovelace Institute's response to the Competition and Markets Authority call for information: algorithms, competition and consumer harm

Background

The Ada Lovelace Institute is an independent research institute and deliberative body with a mission to ensure data and AI work for people and society. This response builds on our research into approaches to regulatory inspection (sometimes referred to as 'audit') of algorithmic systems across domains.

We welcome the Competition and Markets Authority Data, Technology and Analytics Unit's detailed and thoughtful paper Algorithms: How they can reduce competition and harm consumers in laying out an important account of theories of harms, how systems may be investigated or inspected for those harms, and the role of regulators in addressing potentials harms, whether they arise new or are mediated by the use of algorithmic systems. We see the launch of a new programme of work on analysing algorithms as a vital step for any regulator, with the Competition and Markets Authority (CMA) playing an important role in developing and shaping best practice as regulators consider their capacity and strategy with respect to the increasing role of algorithmic systems.

In late 2020 the Ada Lovelace Institute held a series of expert workshops to explore the practicalities and challenges of regulatory inspection across different domains: pricing and competition, in collaboration with Inclusive Competition Forum; social media platforms, in collaboration with Reset; and equality impact and recruitment in collaboration with the Institute for the

[Future of Work](#). All three areas of exploration have relevance to this consultation, as the paper outlines how the CMA's role touches on each of these themes – either as a core responsibility, or in collaboration with other regulators. More recently, our joint workshop with Reset at the ACM Fairness, Accountability and Transparency conference (ACM FAccT 2021) looked at bridging communities of practice around regulatory inspection, including participation from the CMA and Ofcom.

As a result of this work, this response focuses on the latter half of the information call: techniques, the role of regulators and wider approaches to regulating for algorithms, competition and consumer harm.

Response

Techniques for regulatory inspection

Call for information question 5: Are there any examples of techniques that we should be aware of or that we should consider beyond those that we've outlined?

Surfaced in our workshop at FAccT 2021 was [The Citizen Browser Browser Project](#), a tool developed by journalists and engineers at The Markup to collect data on what is displayed to social media users using a custom browser installed by members of a paid study panel to investigate its content recommendation and moderation algorithms.[1] While current uses of the tool are not necessarily within the scope of UK competition and consumer harms concerns, the approach touches on relevant techniques beyond those outlined in the CMA report:

- **Collecting datasets as potential infrastructure of inspection**
  Many algorithm audits in academic literature are one-off targeted investigations conducted by researchers without access to long-term funding or resources. Regulators, in the secure position of having foreseeable scopes of concern, could consider collating datasets, or establishing the tools and processes to do so at pace, as a layer of

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[1] For further detail on the methodology behind the approach, see: Mattu, S. et al. (2021). How We Built a Facebook Inspector. [online] The Markup. Available at: https://themarkup.org/citizen-browser/2021/01/05/how-we-built-a-facebook-inspector [Accessed 12 March 2021].

infrastructure for future inspections and investigations. As highlighted in the CMA paper, this requires careful governance and ethical consideration.

- **The use of a paid national panel to generate data**
  The use of a paid national panel to generate user data for algorithms builds on the traditional methodology of digital 'mystery shoppers' cited in the CMA paper. While a potentially prohibitively costly approach for independent researchers, it could also be considered as part of the infrastructure of inspection for regulators and a way to access real-life data.

- **The potential role of externally collated datasets in complement to platform-provided APIs**
  The CMA paper distinguished between different techniques to investigate harms by whether there is direct access to firms' data and algorithms, and highlights some benefits and challenges of each scenario. Participants in our expert workshops highlighted the need for both approaches to be considered, often in parallel, by regulators, to enable independent verification of firm-provided data access and to consider holistically the experience of consumers as they interact with an algorithm, not merely the algorithm independently of its context.

Separately, one area that the paper touches on briefly but that we have surfaced as deserving of more attention is the challenges of inspecting for harms when numerous automated systems or algorithms are in operation on a platform or influencing an outcome at once. These systems may interoperate, which makes inspection increasingly challenging and raises the question of what level an inspection should be made at - the platform, the algorithm, or other sub-systems of that make up the platform.

The role of regulators

Call for information question 7: Is the role of regulators in addressing the harms we set out in the paper feasible, effective and proportionate?

We agree there is a strong case for intervention, capability development and exploring the scope for greater powers with respect to potential harms

to competition and consumers from opaque use of algorithmic systems.

The report rightly highlights the capacity building the CMA has already done in recruiting interdisciplinary talent to its Data, Technology and Analytics (DaTA) team to facilitate this work, and offers support to other regulators considering these needs. This reflects a challenge across regulators in the UK, and elsewhere, to develop the capacity and capabilities for regulatory inspection of algorithms. The Institute for the Future of Work's Equality Taskforce highlighted the gap in resources and mandate at the Equality and Human Rights Commission for ensuring compliance with equality obligations in the context of data-driven technologies,[2] and our expert workshop surfaced gaps in skills and capabilities for regulatory inspection with respect to equality concerns. Given the intersection of discrimination and differential treatment with consumer harms, while the role of regulators in addressing harms set out is vital, there needs to be additional support across the regulatory landscape for capacity building to make this feasible.

Additional approaches: towards an ecosystem of inspection

Call for information question 8: Are there other ideas or approaches that we should consider as part of our role?

The CMA's paper highlights the benefits of collaboration between UK regulators in different domains, such as in the Digital Markets Unit, and competition authorities internationally. It also recognised the role of researchers, investigative journalists and civil society in intelligence gathering and methodological development and application.

Our research has identified these components as part of a wider emerging ecosystem of inspection - with each part playing a role in ensuring accountability for algorithms and identification and mitigation of harms. In Inspecting algorithms in social media platforms we highlighted the need for

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[2] Institute for the Future of Work Equality Task Force (2020). Mind the gap: how to fill the equality and AI accountability gap in an automated world. [online] Institute for the Future of Work. Available at: https://uploads-ssl.webflow.com/5f57d40eb1c2ef22d8a8ca7e/5fad57ea4869b00f399bd2c3_IFOW-ETF-Mind%20the%20gap%20(v9-12.11.20).pdf [Accessed 12 March 2021].

regulators to have powers to access and engage third-party expertise. Similarly, the CMA paper recognises investigative work by researchers, journalists and other civil society organisations and invites interested parties to provide relevant leads or collaborate on methods to identify competition and consumer harms occurring via algorithmic systems. For regulators to continue to benefit from this expertise, it's worth further considering their role in supporting an ecosystem of inspection.

Through our expert workshops across regulatory domains, two recurring areas for support were highlighted:

- **Incentivising or encouraging auditability in the design and implementation of systems**
  The paper highlights the potential for regulators to encourage transparency, as well as guidance produced by the ICO and the Alan Turing Institute on policies, procedures and documentation that could facilitate inspection for regulators. Further to this, there could be incentivisation of 'auditability by design' in development of algorithmic systems, including by external actors, which may include the software and practices around the algorithm, as much as the algorithm itself.

- **Building confidence and resource for independent actors conducting inspection work**
  Many experts, from a range of jurisdictions, raised concerns around risks of conducting this work, such as uncertain legal footing around terms of service violation through web scraping. In addition, recent work considering the role of community advocates and activists in auditing work highlights ways that wider participation can be encouraged in investigating harms.[3]

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[3] Krafft, P. M. et al. (2021). An Action-Oriented AI Policy Toolkit for Technology Audits by Community Advocates and Activists. In Proceedings of the 2021 ACM Conference on Fairness, Accountability, and Transparency (FAccT '21). Association for Computing Machinery, New York, NY, USA, 772–781. Available at: https://doi.org/10.1145/3442188.3445938 [Accessed 20 March 2021]

Further work

This response builds on the Ada Lovelace Institute's research into regulatory inspection of algorithmic systems as part of our algorithm accountability theme of work. This has included reports [Examining the Black Box](#) and [Inspecting Algorithms in Social Media Platforms](#), expert workshops on regulatory inspection in different domains and interdisciplinary capacity building. We will be continuing this work into 2021 developing approaches to regulatory inspection and supporting a wider ecosystem of algorithm inspection and hope to share relevant findings with the CMA and other regulators as they develop.

About the Ada Lovelace Institute

The Ada Lovelace Institute was established by the Nuffield Foundation in early 2018, in collaboration with the Alan Turing Institute, the Royal Society, the British Academy, the Royal Statistical Society, the Wellcome Trust, Luminate, techUK and the Nuffield Council on Bioethics.

The mission of the Ada Lovelace Institute is to ensure that data and AI work for people and society. We believe that a world where data and AI work for people and society is a world in which the opportunities, benefits and privileges generated by data and AI are justly and equitably distributed and experienced.

We recognise the power asymmetries that exist in ethical and legal debates around the development of data-driven technologies, and will represent people in those conversations. We focus not on the types of technologies we want to build, but on the types of societies we want to build.

Through research, policy and practice, we aim to ensure that the transformative power of data and AI is used and harnessed in ways that maximise social wellbeing and put technology at the service of humanity.

We are funded by the Nuffield Foundation, an independent charitable trust with a mission to advance social wellbeing. The Foundation funds research that informs social policy, primarily in education, welfare and justice. It also

provides opportunities for young people to develop skills and confidence in STEM and research. In addition to the Ada Lovelace Institute, the Foundation is also the founder and co-funder of the Nuffield Council on Bioethics and the Nuffield Family Justice Observatory.

Find out more:

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