
SCROLL, CLICK, LIKE, SHARE, REPEAT: THE ALGORITHMIC POLARISATION PHENOMENON

JYE BEARDOW*

INTRODUCTION

It is likely Aristotle would look at today's hyper-polarised politics with great dismay. Around the world, political discourse is shifting further and further towards the political extremes, with reason giving way to demagoguery, hostility replacing civility, and tribalism trumping social cohesion. For many, contemporary politics has become completely unrecognisable. Indeed, Aristotle wrote that a political system held hostage by fringe extremes will eventually transform itself into something entirely unnatural.¹

A common explanation put forward for increasing polarisation is the influence of social media—in particular, recommendation algorithms.² The theory holds that recommendation algorithms create partisan echo-chambers comprised of extremist rhetoric and disinformation.³ This amplifies difference and engenders resentment, pushing political candidates and discourse in binary directions.⁴ This paper labels this alleged phenomenon 'algorithmic polarisation'. As such, this paper will seek to answer the following question: are social media's recommendation algorithms responsible for increased political polarisation? In answering this question in the affirmative, this paper will explore possible regulatory responses.

In Part I, this paper will provide context by offering a brief overview of recommendation algorithms and political polarisation. Part II will then assess whether these algorithms drive polarisation, exploring issues such as digital echo-chambers, disinformation, and online

* Jye Beardow is a Tuckwell Scholar and final-year BCOMM/LLB (Hons) student at the Australian National University. A version of this paper was produced for LAWS4283, for which Jye was awarded the Proximity Prize for Information Law.

¹ Aristotle, *Politics Books V and VI* (Oxford University Press, 1998).

² Levi Boxell, Matthew Gentzkow and Jesse Shapiro, 'Is the Internet Causing Political Polarization? Evidence from Demographics' (Working Paper No 23258, National Bureau of Economic Research, March 2017) 2.

³ Ibid.

⁴ Ibid.

radicalisation. Finally, Part III will canvass possible regulatory responses, including self-regulation, transparency measures, and command-control legislation.

Ultimately, this paper finds sufficient evidence of algorithmic polarisation, though noting it may be overstated. However, this assessment is curtailed by our limited access to, and knowledge of, the algorithms themselves. Accordingly, this paper advocates for greater transparency measures so that evidence-based regulation can be developed.

I CONTEXT

In the age of computers, artificial intelligence ('AI') and machine-learning are everywhere.⁵ This paper is confined to exploring one particular type of machine-learning AI—social media's recommendation algorithms.

A *What are Recommendation Algorithms?*

Recommendation algorithms are used by social media companies to determine the content a user will see on the 'newsfeed' function of their platform.⁶ These platforms (or information intermediaries)⁷ primarily include Facebook, Twitter, Instagram and YouTube.

Recommendation algorithms filter, sort, rank and personalise the content which appears in the newsfeed according to the interest and preferences of each user.⁸ This is done based on user reactions such as clicks, likes, shares, comments and view time, as well as a range of other (unknown) decision-making principles.⁹ The result is algorithmic *curation* of content tailored according to *individual relevance*.¹⁰ This is why no two users' newsfeeds are identical. This is also why users continually find interesting posts when scrolling through Facebook or Twitter, or get stuck watching recommended YouTube videos for hours on end.¹¹ These posts are there

⁵ Robert Elliot Smith, *Rage Inside the Machine: The Prejudice of Algorithms, and How to Stop the Internet Making Bigots out of Us All* (Bloomsbury Publishing, 2019).

⁶ Birgit Stark and Daniel Stegmann, 'Are Algorithms a Threat to Democracy? The Rise of Intermediaries: A Challenge for Public Discourse' (Research Paper, Algorithm Watch, 26 May 2020) 6.

⁷ Intermediaries are 'brokers of information that position themselves between producers and consumers while altering the flow of information': see Pascal Jürgens and Birgit Stark, 'The Power of Default on Reddit: A General Model to Measure the Influence of Information Intermediaries' (2017) 9(4) *Policy & Internet* 395, 398.

⁸ Stark and Stegmann (n 6) 9–10.

⁹ Ibid 6, 13.

¹⁰ As opposed to what is most relevant to society as a whole: see Stark and Stegmann (n 6) 10.

¹¹ John Naughton, 'From Viral Conspiracy Theories to Exam Fiascos, Algorithms Come with Serious Side Effects', *The Guardian* (online, 6 September 2020) <<https://www.theguardian.com/technology/2020/sep/06/from-viral->

‘because the machine-learning algorithm that “curates” the feed has learned about your preferences and interests.’¹² Before recommendation algorithms, content was largely curated in reverse chronological order.¹³

Beyond the fact these algorithms are designed to maximise the time one spends using the platform,¹⁴ little is known about their precise design principles or decision-making processes.¹⁵ Nor are these systems clearly articulated to users.¹⁶ As such, they are commonly referred to as “black boxes”.¹⁷

B Political Polarisation

Political polarisation can be defined as ‘the ideological division of a society into different (extreme) political camps’.¹⁸ There is little doubt this phenomenon is occurring around the world. For example, the Pew Research Centre has long documented increasing polarisation in the United States,¹⁹ while there is also a substantial body of evidence supporting its stranglehold on European politics.²⁰ The election of Donald Trump, Brexit, and the results of the recent European Parliamentary elections are all commonly held out as manifestations of increased polarisation.

Australia is also not immune to polarisation. Since 1997, the Australian Election Study has recorded a sharp decline in the number of politicians describing themselves as ‘moderate’, and a concomitant increase in the percentage of voters describing themselves as ‘left’ or ‘right’ as

conspiracies-to-exam-fiascos-algorithms-come-with-serious-side-effects> (‘From Viral Conspiracy Theories to Exam Fiascos’).

¹² Ibid.

¹³ Reuter’s staff, ‘Instagram to Ditch Chronological User Feed for ‘Interest’ Based One’, *Reuters* (online, 16 March 2016) <<https://www.reuters.com/article/us-instagram-feed-idUSKCN0WI10L>>.

¹⁴ Alina Sirbu et al, ‘Algorithmic Bias Amplifies Opinion Fragmentation and Polarization: A Bounded Confidence Model’ (Research Article, 5 March 2019) <<https://journals.plos.org/plosone/article?id=10.1371/journal.pone.0213246>>.

¹⁵ Stark and Stegmann (n 6) 9.

¹⁶ Konrad Lischka and Christian Stöcker, ‘Digital Public: Looking at What Algorithms Actually Do’, *The Conversation* (online, 7 February 2018) <<https://theconversation.com/digital-public-looking-at-what-algorithms-actually-do-91119>>.

¹⁷ Frank Pasquale, *The Black Box Society: The Secret Algorithms That Control Money and Information* (Harvard University Press, 2015).

¹⁸ Stark and Stegmann (n 6) 15.

¹⁹ *Pew Research Centre* (Web Page) <<https://www.pewresearch.org>>.

²⁰ Christopher Groskopf, ‘European Politics is More Polarized than Ever, and These Numbers Prove It’, *Quartz* (online, 30 March 2016) <<https://qz.com/645649/european-politics-is-more-polarized-than-ever-and-these-numbers-prove-it/>>.

opposed to ‘centre’.²¹ Additionally, voter anger and distrust towards politicians continues to climb.²² Undoubtedly, this has deleterious consequences for democracy, including heightened incivility and unrest, legislative gridlock, extremism, and mistrust in institutions.²³

II ALGORITHMIC POLARISATION

The increase in polarisation alongside the rise of social media has led many to speculate that recommendation algorithms are responsible.²⁴ However, does this claim hold up to scrutiny?²⁵

A *The Case For*

More people than ever before are consuming news and information through online intermediaries.²⁶ As a result, the task of information *gatekeeping*—the ‘process by which news organisations make decisions as to which of the events taking place or issues being discussed receive coverage’²⁷—has been usurped by algorithmic curation.²⁸ Recommendation algorithms therefore have a powerful ability to shape public discourse, slowly replacing the gatekeeping role played by traditional media channels.²⁹ Unlike these traditional media gatekeepers, algorithms filter content according to strictly economic rather than editorial values—prioritising the generation of attention and platform usage.³⁰ While these traditional channels are certainly not

²¹ *The Australian Election Study* (Web Page) <<https://australianelectionstudy.org>>, quoted in Lachlan Harris and Andrew Charlton, ‘The Fundamental Operating Model of Australian Politics is Breaking Down’, *The Sydney Morning Herald* (online, 2 April 2018) <<https://www.smh.com.au/politics/federal/the-fundamental-operating-model-of-australian-politics-is-breaking-down-20180322-p4z5o9.html>>.

²² *Ibid.* See also Luke Mansillo and Nick Evershed, ‘Australian Politics Becoming More Polarised’, *The Guardian* (online, 7 August 2014) <<https://www.theguardian.com/news/datablog/2014/aug/07/australian-politics-becoming-more-polarised>>.

²³ Stark and Stegmann (n 6) 33–4, 43. See generally Cowen Centre, ‘Sir Zelman Cowen Centre Oration 2020: The Hon Kenneth Hayne QC AC’ (YouTube, 5 August 2020) <<https://www.youtube.com/watch?v=Qe5z50wpKAw&feature=youtu.be>>.

²⁴ Axel Bruns, ‘Investigate the Root Cause of Polarisation—Don’t Just Blame Social Media Filter Bubbles’, *The Sydney Morning Herald* (online, 29 July 2019) <<https://www.smh.com.au/business/companies/investigate-the-root-cause-of-filter-bubbles-not-social-media-algorithms-20190725-p52alk.html>>.

²⁵ *Ibid.*

²⁶ Orowa Skider et al, ‘When Facts Fail: Bias, Polarisation and Truth in Social Networks’ (Research Paper, University College of London, 22 January 2020) 1 <<https://arxiv.org/pdf/1808.08524.pdf>>.

²⁷ Phillip Napoli, *Social Media and the Public Interest: Media Regulation in the Disinformation Age* (Columbia University Press, 2019) 59.

²⁸ Lischka and Stöcker (n 16).

²⁹ Stark and Stegmann (n 6) 6.

³⁰ *Ibid.*

infallible,³¹ it could be argued that algorithmic curation has severely corrupted the diversity and accuracy of information, contributing to polarisation in three ways.

1 *Echo-chambers*

An echo-chamber exists in situations where users are exposed only to opinions that agree with their own while being shielded from different perspectives.³² An analysis by the University College of London (‘UCL’) found that echo-chambers are an inevitable consequence of recommendation algorithms, enabling confirmation bias at ‘unprecedented scales’.³³ For example, Twitter users are largely only exposed to political opinions that agree with their own.³⁴ While our Prime Minister might dismiss this effect as the ‘Canberra bubble’,³⁵ some studies have found that these digital echo-chambers are contributing to enhanced fragmentation and polarisation.³⁶ Accordingly, Google whistleblower Tristan Harris has likened algorithms to ‘Big Tobacco for our brains’.³⁷

Alarmingly, as algorithms segregate users into distinct online communities, ‘groups striving for political power’ are able to propagate real world divisions using techniques such as micro-targeted advertising and digital gerrymandering.³⁸

³¹ Particularly with calls intensifying in Australia for a Royal Commission to ensure a strong, diverse Australian news media.

³² Kiran Garimella et al, ‘Political Discourse on Social Media: Echo Chambers, Gatekeepers, and the Price of Bipartisanship’ (Research Paper, International World Wide Conference Committee, 2018) 1 <<https://arxiv.org/pdf/1801.01665.pdf>>.

³³ Skider et al (n 26).

³⁴ Garimella et al (n 32) 1–2.

³⁵ Jordan Hayne, ‘Canberra Bubble named 2018 Word of the Year by Australian National Dictionary Centre’, *ABC* (online, 13 December 2018) <<https://www.abc.net.au/news/2018-12-13/australian-word-of-the-year-canberra-bubble/10611238>>.

³⁶ Sirbu et al (n 14).

³⁷ Brian Flood, ‘Ex-Google Staffer Warns Social Media, Apps are ‘Big Tobacco for Our Brains’’, *Fox News* (online, 8 October 2020) <<https://www.foxnews.com/media/tristan-harris-big-tech-big-tobacco>>.

³⁸ Robert Elliot Smith, ‘My Social Media Feed Looks Different from Yours and It’s Driving Political Polarization’, *USA Today* (online, 2 September 2019) <<https://www.usatoday.com/story/opinion/voices/2019/09/02/social-media-election-bias-algorithms-diversity-column/2121233001/>>, discussing Skider et al (n 26). See also Channel 4 News Investigation Team, ‘Revealed: Trump Campaign Strategy to Deter Millions of Black Americans from Voting in 2016’, *Channel 4 News* (online, 28 September 2020) <<https://www.channel4.com/news/revealed-trump-campaign-strategy-to-deter-millions-of-black-americans-from-voting-in-2016>>.

2 *Online Radicalisation and Extremism*

There are also concerns about the type of content that is algorithmically amplified in echo-chambers. For instance, recommendation algorithms ‘attract and elevate’ highly charged and emotive content over more mundane material.³⁹ For example, on Twitter, tweets expressing moral anger and disgust are more likely to be retweeted,⁴⁰ while partisan users are more likely to enjoy a greater viewership.⁴¹ Consequently, there is a price to being bipartisan on social media.⁴²

Further, a study by the National Academy of Science found that Facebook’s algorithm over time leads users to conspiracy theories.⁴³ As a result, fringe groups such as QAnon, anti-vaxers, 5G alarmists, and COVID-19 deniers become increasingly mainstream.⁴⁴ Hence, the attention-maximisation strategy employed by algorithms pushes users towards increasingly extreme and radical content,⁴⁵ dramatically slowing down the speed at which convergence of opinion can occur.⁴⁶

3 *Disinformation*

Due to these ‘attention driven logics’, recommendation algorithms are extremely ‘vulnerable to being misused as a conductor for the fast and widespread dissemination of disinformation.’⁴⁷ This includes the spreading of malicious content by foreign actors, designed to influence election outcomes.⁴⁸ For example, Facebook has acknowledged that up to 146 million users may have been subject to Russian disinformation in 2016, while YouTube and Twitter have admitted to 1,108 Russian-linked videos and 36,747 Russian-linked accounts respectively.⁴⁹ In a speech

³⁹ Andrew Marantz, ‘Why Facebook Can’t Fix Itself’, *The New Yorker* (online, 12 October 2020) <<https://www.newyorker.com/magazine/2020/10/19/why-facebook-cant-fix-itself>>. See also Lischka and Stöcker (n 16).

⁴⁰ William Brady et al, ‘An Ideological Asymmetry in the Diffusion of Moralized Content on Social Media among Political Elites’ (Research Paper, September 2018) 3 <<https://psyarxiv.com/43n5e/>>.

⁴¹ Garimella et al (n 32) 1–2.

⁴² Ibid.

⁴³ Michela Del Vicario et al, ‘The Spreading of Misinformation Online’ (2016) 113(3) *PNAS* 554.

⁴⁴ See Md Saiful Islam et al, ‘COVID-19-Related Infodemic and Its Impact on Public Health: A Global Analysis’ (2020) 103(4) *The American Journal of Tropical Medicine and Hygiene* 1621.

⁴⁵ Naughton, ‘From Viral Conspiracy Theories to Exam Fiascos’ (n 11). See also Zeynep Tufekci, ‘YouTube, the Great Radicalizer’, *The New York Times* (online, 10 March 2018) <<https://www.nytimes.com/2018/03/10/opinion/sunday/youtube-politics-radical.html>>.

⁴⁶ Sirbu et al (n 14).

⁴⁷ Stark and Stegmann (n 6) 38.

⁴⁸ Bruns (n 24).

⁴⁹ The Economist, ‘Do Social Media Threaten Democracy?’, *The Economist* (online, 4 November 2017) <<https://www.economist.com/leaders/2017/11/04/do-social-media-threaten-democracy>>.

announcing a new online disinformation taskforce, Australia's Foreign Affairs Minister Marise Payne stated that 'the disinformation we have seen contributes to a climate of fear and division when what we need is cooperation and understanding'.⁵⁰ Thus, by accelerating the spread of disinformation, conspiracy theories, and extremist rhetoric, algorithms indirectly contribute 'to polarisation by facilitating a distorted picture of the climate of opinion'.⁵¹ Algorithms have thus 'produced a polluted public-sphere in which misinformation can compete with more accurate news'.⁵²

Beyond polarisation concerns, issues with respect to privacy and censorship also arise from the use of recommendation algorithms, including data harvesting and shadow banning.⁵³ However, these concerns are beyond the scope of this paper.

B *The Case Against*

There is some evidence questioning the extent of algorithmic polarisation. For example, a recent study found that polarisation is actually greater amongst the age groups who use social media the least (75 and older).⁵⁴ Other studies have suggested that use of online media may actually decrease support for far-right extremism,⁵⁵ while others challenge the popular theory that YouTube's recommendation algorithm is responsible for funnelling users towards a pipeline of radical content.⁵⁶ Also commonly pointed out is the fact that the onset of polarisation predates social media (though polarisation is now likely accelerating because of it).⁵⁷ On the whole, those sceptical of algorithmic polarisation do not argue that it is necessarily untrue, just that it is a

⁵⁰ Stephen Dziedzic and Melissa Clarke, 'Morrison Government to Set up Taskforce to Counter Online Disinformation', *ABC* (online, 17 June 2020) <<https://www.abc.net.au/news/2020-06-17/foreign-minister-steps-up-criticism-china-global-cooperation/12362076>>.

⁵¹ Stark and Stegmann (n 6) 4.

⁵² Naughton, 'From Viral Conspiracy Theories to Exam Fiascos' (n 11).

⁵³ Chanté Joseph, 'Instagram's Murky 'Shadow Bans' Just Serve to Censor Marginalised Communities', *The Guardian* (online, 9 November 2019) <<https://www.theguardian.com/commentisfree/2019/nov/08/instagram-shadow-bans-marginalised-communities-queer-plus-sized-bodies-sexually-suggestive>>.

⁵⁴ Boxell (n 2) 3.

⁵⁵ Gideon Lewis-Kraus, 'Bad Algorithms Didn't Break Democracy', *Wired* (online, 15 January 2020) <<https://www.wired.com/story/polarization-politics-misinformation-social-media/>>.

⁵⁶ Paris Martineau, 'Maybe It's Not YouTube's Algorithm That Radicalizes People', *Wired* (online, 23 October 2019) <<https://www.wired.com/story/not-youtubes-algorithm-radicalizes-people/>>. Cf Manuel Ribeiro et al, 'Auditing Radicalization Pathways on YouTube' (Research Paper, December 2019) <<https://arxiv.org/pdf/1908.08313.pdf>>.

⁵⁷ Ezra Klein, *Why We're Polarized* (Simon & Schuster, 2020), discussed in Lewis-Kraus (n 55).

‘overstated’, ‘premature’ and ‘incomplete’ theory.⁵⁸ Indeed, our ability to assess whether algorithms drive polarisation is limited by the fact that they are ‘inscrutable’⁵⁹—following ‘opaque and non-transparent decision-making processes’.⁶⁰ Research into algorithmic polarisation is thus ‘hindered by a lack of access to platform data’.⁶¹

Nevertheless, on a balanced analysis of the literature, it can be concluded that while ‘fears of filter bubbles and echo chambers seem overstated’,⁶² there is sufficient evidence that algorithms are contributing to polarisation to some extent.⁶³

III POSSIBLE REGULATORY RESPONSES

While intermediaries have long operated in a regulation-free environment, globally there is an increasing appetite for the regulation of ‘big-tech’.⁶⁴ This section will explore three possible regulatory responses to algorithmic polarisation: self-regulation, command-control legislation, and transparency measures. Ultimately, this section concludes that in the interests of developing evidence-based regulation, transparency measures are the appropriate entry-level response to algorithmic polarisation.

⁵⁸ Kevin Munger and Joseph Phillips, ‘A Supply and Demand Framework for YouTube Politics’ (Research Paper, Penn State Political Science, October 2019) 1 <<https://osf.io/73jys/>>. See also Sirbu et al (n 14).

⁵⁹ Bruns (n 24).

⁶⁰ Lewis-Kraus (n 55).

⁶¹ Algorithm Watch, *The Only Way to Hold Facebook, Google and Others Accountable: More Access to Platform Data* (Web Page) <<https://algorithmwatch.org/en/governing-platforms-studies-may-2020/>>.

⁶² Stark and Stegmann (n 6) 4.

⁶³ Ibid 3.

⁶⁴ The Australian Government has published a draft news media bargaining code regulating social media: see Australian Competition & Consumer Commission, *Draft News Media Bargaining Code* (Web Page) <<https://www.accc.gov.au/focus-areas/digital-platforms/draft-news-media-bargaining-code>>. Many, including President Donald Trump, are heeding calls for a ban on Tik Tok: see Tim Wu, ‘A Tik Tok Ban Is Overdue’, *The New York Times* (online, 18 August 2020) <<https://www.nytimes.com/2020/08/18/opinion/tiktok-wechat-ban-trump.html>>. The US Department of Justice has filed an antitrust suit against Google: see ABC News, ‘The US Department of Justice is Suing Google in Antitrust Case for Allegedly Abusing its Monopoly Powers’, *ABC* (online, 21 October 2020) <<https://www.abc.net.au/news/2020-10-21/us-says-google-breakup-may-be-needed-to-end-antitrust-violations/12796440>>. In the US, debate is raging over removing the exemption given to social media companies by the *Communications Decency Act 1996*, 47 USC § 230: see Abram Brown, ‘What is Section 230—And Why Does Trump Want to Change It?’, *Forbes* (online, 28 May 2020) <<https://www.forbes.com/sites/abrambrown/2020/05/28/what-is-section-230-and-why-does-trump-want-to-change-it/>>.

A *Self-Regulation*

One regulatory option to address algorithmic polarisation is self-regulation.⁶⁵ For instance, intermediaries could take it upon themselves to alter their recommendation algorithms, striking a balance between *personalisation* and *diversity* of content. This could be achieved through something like an industry code of ethics governing the design principles and developers of recommendation algorithms.⁶⁶ Additionally, internal content moderation policies such as bans on misinformation,⁶⁷ fact checks and warning labels,⁶⁸ and limitations on the sharing of articles⁶⁹ are also useful tools.⁷⁰ For example, Mark Zuckerberg has stated that Facebook’s algorithm marginalises content flagged as false⁷¹ (though, there is really no way to test the veracity of this claim).

Nevertheless, there is a glaring problem with this regulatory approach: such a change goes completely against the self-interest and profit motive of intermediaries. In an arms race for attention,⁷² it is highly unlikely that we can rely on competing social media companies to change their attention-maximising algorithms, as doing so would reduce their advertising revenues.⁷³ It is for this reason that self-regulatory efforts have so far failed,⁷⁴ with some describing AI ethical guidelines as ‘paper tigers’.⁷⁵ As such, ‘[b]ecause these changes cut against a business model designed to monopolise attention, they may well have to be imposed by a law or regulator.’⁷⁶

⁶⁵ Matthias Cornils, ‘Designing Platform Governance: A Normative Perspective on Needs, Strategies, and Tools to Regulate Intermediaries’ (Research Paper, Algorithm Watch, 26 May 2020) 27-49.

⁶⁶ Lischka and Stöcker (n 16).

⁶⁷ Alex Hearn, ‘YouTube Bans Misinformation About Covid Vaccinations’, *The Guardian* (online, 15 October 2020) <<https://www.theguardian.com/technology/2020/oct/14/youtube-bans-misinformation-about-covid-vaccinations>>.

⁶⁸ Kim Lyons, ‘Facebook Will Announce Presidential Election Result in Facebook and Instagram Notifications’, *The Verge* (online, 5 November 2020) <<https://www.theverge.com/2020/11/5/21552064/facebook-election-winner-instagram-notification-president-trump-biden>>.

⁶⁹ Alex Hearn, ‘Twitter Aims to Limit People Sharing Articles They Have Not Read’, *The Guardian* (online, 11 June 2020) <<https://www.theguardian.com/technology/2020/jun/11/twitter-aims-to-limit-people-sharing-articles-they-have-not-read>>.

⁷⁰ Though, they are limited by their reactionary nature.

⁷¹ Mark Zuckerberg, ‘Preparing for Elections’ (Facebook, 13 September 2018) <<https://www.facebook.com/notes/mark-zuckerberg/preparing-for-elections/10156300047606634/>>.

⁷² Centre for Humane Technology, *Tristan Harris* (Web Page) <<https://www.tristanharris.com>>.

⁷³ Stark and Stegmann (n 6) 12.

⁷⁴ Jef Ausloos et al, ‘Operationalizing Research Access in Platform Governance: What to Learn from Other Industries?’ (Research Paper, Algorithm Watch, 25 June 2020) 20.

⁷⁵ Leonard Haas and Sebastian Giebier, ‘In the Realm of Paper Tigers—Exploring the Failings of AI Ethics Guidelines’ (Web Page, Algorithm Watch, 2 April 2020) <<https://algorithmwatch.org/en/ai-ethics-guidelines-inventory-upgrade-2020/>>.

⁷⁶ The Economist (n 49).

B *Command-Control*

Some argue that legislation should be implemented promoting diversity of content in algorithmic processes.⁷⁷ For example, researchers from UCL have suggested that the engineers of recommendation algorithms could be subject to a legislative imperative compelling them to design algorithms based on principles that ‘balance optimisation and the promotion of diverse ideas’.⁷⁸ However, there are also a number of challenges with this approach.

First, any attempt to legislate changes to the way information is curated or displayed online will inevitably run into free speech and online freedom arguments.⁷⁹ Legislation would have to comply with any constitutional guarantees, such as the US First Amendment⁸⁰ or the Australian implied freedom of political communication.⁸¹ Secondly, it is highly likely that such regulation would be met with extreme push back from social media companies, given the factors discussed above. Indeed, intermediaries like Facebook consistently threaten to ‘pack-up and leave’ any time strong regulation is proposed (see Facebook’s response to Australia’s draft news media bargaining code⁸² or response to an order by the Irish data protection commissioner⁸³ as examples of this). Jurisdictional problems also arise when intermediaries are headquartered overseas, further complicating regulatory efforts. Thirdly, and most importantly, ‘you cannot regulate what you don’t understand’.⁸⁴ As established, we simply do not have enough access to

⁷⁷ Lischka and Stöcker (n 16).

⁷⁸ Smith (n 38).

⁷⁹ Rohit Saran and Neelam Raaj, ‘A 15-Year-Old Influencer Can Now Reach as Many People as a Newspaper But With None of the Responsibility’, *The Times of India* (online, 11 October 2020) <<https://timesofindia.indiatimes.com/india/a-15-year-old-influencer-can-now-reach-as-many-people-as-a-newspaper-but-with-none-of-the-responsibility/articleshow/78596272.cms>>. See generally Kalina Bontcheva, ‘Balancing Act: Countering Digital Disinformation While Respecting Freedom of Expression’ (Research Paper, Broadband Commission for Sustainable Development, September 2020) <https://www.broadbandcommission.org/Documents/working-groups/FoE_Disinfo_Report.pdf>.

⁸⁰ *United States Constitution* amend I.

⁸¹ See, eg, *Lange v Australian Broadcasting Corporation* (1997) 189 CLR 520; *McCloy v New South Wales* (2015) 257 CLR 178.

⁸² Lisa Visentin and Zoe Samios, ‘“Uneconomic”: Facebook Says New Laws Mean It Will Ban News in Australia’, *The Sydney Morning Herald* (online, 16 September 2020) <<https://www.smh.com.au/politics/federal/uneconomic-facebook-says-new-laws-mean-it-will-ban-news-in-australia-20200916-p55w8w.html>>.

⁸³ John Naughton, ‘Can Democracies Stand up to Facebook? Ireland may have the Answer’, *The Guardian* (online, 27 September 2020) <https://www.theguardian.com/commentisfree/2020/sep/26/can-democracies-stand-up-to-facebook-ireland-may-have-the-answer?CMP=Share_iOSApp_Other>.

⁸⁴ Algorithm Watch, *The Only Way to Hold Facebook, Google and Others Accountable: More Access to Platform Data* (Web Page) <<https://algorithmwatch.org/en/governing-platforms-studies-may-2020/>>.

algorithmic data to design evidence-based command-control regulations.⁸⁵ As such, a cautionary approach to the regulation of algorithms should be preferred.⁸⁶

C *Transparency Measures*

This paper takes the view that a ‘decision to regulate should be grounded in empirical evidence’.⁸⁷ As such, recommendation algorithms could be made accessible to external researchers, journalists, academics, policy makers and civil society actors.⁸⁸ Fully understanding recommendation algorithms, their decision-making processes, and their connection with polarisation is a prerequisite to further regulation.

This approach is not without problems either. First, intermediaries will not readily hand over access to their algorithms.⁸⁹ These are core business and proprietary assets, usually patented and protected by trade secrecy.⁹⁰ Secondly, there are issues pertaining to the privacy of user data.⁹¹ One suggestion for mitigating both of these concerns is to set up an independent body which would act as an intermediary between disclosing corporations and recipients.⁹² Information could also be protected by non-disclosure agreements. In the interim, educational measures aimed at improving media literacy⁹³ and promoting user awareness of how algorithms influence public discourse could also be explored.⁹⁴ Although, this may face some resistance from users who are used to, and believe they benefit from, algorithms which provide tailored content.

Therefore, in the interests of evidence-based regulation, transparency measures are the preferred entry-level regulatory approach.

⁸⁵ Ibid.

⁸⁶ Cornils (n 65) 4.

⁸⁷ Ibid.

⁸⁸ Ausloos et al (n 74) 8.

⁸⁹ Julia Angwin, ‘Making Algorithms Accountable’, *ProPublica* (online, 1 August 2016) <<https://www.propublica.org/article/making-algorithms-accountable>>.

⁹⁰ Ibid. See also Pasquale (n 17).

⁹¹ Ausloos et al (n 74) 87–8.

⁹² Ibid.

⁹³ Joint Standing Committee on Electoral Matters, Parliament of Australia, *Report on the Conduct of the 2016 Federal Election and Matters Related Thereto* (Final Report, November 2018) 177–9.

⁹⁴ Lischka and Stöcker (n 16).

CONCLUSION

This paper sought to answer the following question: are social media's recommendation algorithms responsible for increased political polarisation? A balanced analysis of the literature has revealed that while the link between polarisation and recommendation algorithms may be overstated, there is nevertheless sufficient evidence of algorithmic polarisation. However, this assessment is curtailed by our limited access to, and knowledge of, the algorithms themselves. Accordingly, this paper advocates for the greater transparency measures. Ultimately, a greater understanding of the decision-making principles governing recommendation algorithms is needed before evidence-based regulation can be developed or considered.