ADM+S Submission to The Joint Select Committee on Social Media and Australian Society

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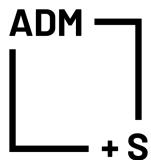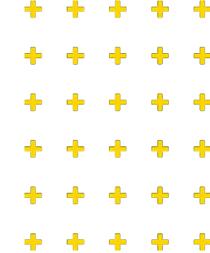
About ADM+S

The ADM+S is pleased to have this opportunity to engage with The Joint Select Committee on Social Media and Australian Society. The [ARC Centre of Excellence for Automated Decision-Making and Society (ADM+S)](#) is a cross-disciplinary, national research centre established and supported by the Australian Research Council to create the knowledge and strategies necessary for responsible, ethical, and inclusive automated decision-making (ADM).[1] More information about ADM+S and its research may be found on our website, http://www.admscentre.org.au/.

This submission

This submission is the product of a collaborative process involving direct contributions from the above researchers from ADM+S, as led and consolidated by A/Prof James Meese (RMIT University). ADM+S researchers come from many different institutions, disciplines and perspectives. It should not be assumed that every contributing author, or every member of the Centre subscribes to every comment or recommendation in this submission. The submission represents our best effort to consolidate research and thinking in a way that can be useful to the Committee and The Parliament of Australia more broadly. We are happy to put the Committee in touch with experts in the Centre for further discussion.

Executive Summary

The ADM+S is pleased to have this opportunity to engage with an important and complex series of questions around the role of social media in Australian society.

When considering **the use of age verification to protect Australian children from social media**, our research shows that facial recognition technologies are unreliable, of limited efficacy and have a racial and gender bias. In cases where facial recognition is deployed, cumbersome real-life double checking of the system's alerts is required, with humans still required to do the actual work of age-verification.

Our submission also considers developments in China, where authorities placed a series of restrictions on people aged 18 or below playing video games and relied on facial recognition technology to enforce the reform. Despite the significant technological capabilities of the Chinese state, the use of facial recognition technology has been largely ineffective there.

We question the viability of **the News Media Bargaining Code**, with the model wrongly presuming that all digital platforms consistently need news content to provide a service. We encourage the committee to re-consider the recommendations from the Digital Platforms Inquiry *Preliminary Report*, where holistic regulatory oversight was proposed that directly remedied the information asymmetry news organisations are currently facing. If the Australian Government wants to force certain platforms to carry a certain amount of Australian news content, a different legislative instrument may be required.

Australian journalism, news and public interest media currently play both constructive and less constructive roles in the circulation of **mis- and disinformation on digital platforms.** While responsible reporting is a critical element of the wider information ecosystem, mis- and disinformation can also be amplified through reporting from mainstream media outlets. The practice of sourcing stories from social media, including by reporting on viral TikTok videos or Twitter controversies, is a key source of this amplification. Our submission also highlights the important role that independent fact-checkers continue to play.

There is very little systematic knowledge about how **platforms' algorithms, recommender systems and business tactics** influence what Australians see (and hear). We detail a range of new and ongoing research projects and infrastructure across the ADM+S Centre, which are developing the methods and tools to better understand these systems. The newly launched, federally funded Australian Internet Observatory (funded by NCRIS through the ARDC) will enable such work to be scaled further to a national level.

The ADM+S Australian Ad Observatory has also found that **harmful and illegal content** can also form a substantial component of the everyday advertising content served to Australians by social media. The Australian Ad Observatory has used novel data donation methodologies to provide unprecedented insights into the online advertising experience of Australian Facebook users, identifying harmful or illegal advertising content that includes unlawful scam content, harmful and, in some cases, potentially unlawful gambling advertising, and concerning patterns of alcohol (also discussed above in Topic 4) and unhealthy food advertising.

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The use of age verification to protect Australian children from social media

The government is about to trial age assurance technologies to restrict access to pornography and is considering restricting social media to young adults 16 and over.

While the government refers to these tools as "age assurance", many of them are more accurately called "age estimation". Published in *Big Data and Society*, a new study into one common facial age estimation tool, led by ADM+S Research Fellow Zahra Stardust, shows that these technologies are unreliable, and have a racial and gender bias.[2]

Civil society groups also have cited privacy and feasibility concerns about age estimation technology. These include: accessibility issues for people without identity documents; the potential burden on public interest projects such as Wikipedia, and small, low-income websites; queries about what data could be collected, sold or exploited; and the likelihood of circumvention.

Age estimation is already a fraught task when done by humans, who regularly misjudge age. It is no better when done by machines. Age estimation software that uses facial recognition relies on stereotypical indicators of age, such as hair, wrinkles and jawlines. These are highly variable – for example, wrinkles can be altered by cosmetics or injectables. Studies also indicate that facial recognition software often has a significant racial and gender bias.

In our research, we used an accepted industry-leading convolutional neural network technology to analyse a dataset of 10,139 facial images. We found that the model was most accurate in estimating age in the "Caucasian" category and least accurate in the "African" category. Boys were more likely to be misclassified than girls, especially in the 0–12 age bracket. People aged 26 and over were generally misclassified as younger, sometimes by as much as 40 years.

Another study published by ADM+S researchers in the journal *Information, Communication & Society* looked at the implementation of age estimation video surveillance set up on the physical premises of a large Australian gambling chain. When the developers of the age estimation tool were interviewed, they admitted that it was of limited efficacy in detecting underage subjects. The tool was set to "err on the side of caution", but this necessitated cumbersome real-life double checking of the system's alerts. Ultimately the study concluded that the age-estimation tool was largely "performative in nature", with humans still required to do the actual work of age-verification.[3]

In the eSafety Commissioner's own research young people were concerned age assurance is of limited efficacy and comes with privacy and security issues.[4]

It is also worth questioning whether proposed age assurance mechanisms or limits on access to social media will address societal concerns about the activities of minors online. A counterpoint

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[2] Stardust, Z., Obeid, A., McKee, A., & Angus, D. (2024). Mandatory age verification for pornography access: Why it can't and won't 'save the children'. Big Data & Society, 11(2). https://doi.org/10.1177/20539517241252129

[3] O'Neill, C., Selwyn, N., Smith, G., Andrejevic, M., & Gu, X. (2022). The two faces of the child in facial recognition industry discourse: biometric capture between innocence and recalcitrance. *Information, Communication & Society*, *25*(6), 752–767. https://doi.org/10.1080/1369118X.2022.2044501

[4] eSafety Commissioner, *Questions, doubts and hopes: young people's attitudes towards age assurance and the age-based restriction of access to online pornography*, Report, September 2023.

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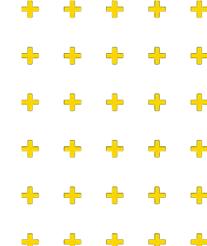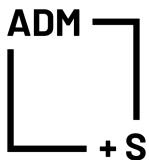
is offered by developments in China, where a regulation focused on preventing minors from online game addiction was introduced.[5] In the Notice, Chinese authorities restricted people aged 18 or below to playing video games for no more than 90 minutes a day on weekdays, with gaming ceasing at 10 p.m. More time was granted on weekends and public holidays, with play permitted for up to three hours.

The Notice was enacted using facial recognition services[6] that sought to verify user ages and was generally unsuccessful as the technology was ineffective even within a highly surveillant nation such as China. Evidence is found in data from games companies outside China, which indicate an *increase* in use by Chinese after deployment, with researchers specifically noting that "restriction policies on youth digital behaviour may lead to no widespread and uniform decrease in utilization".[7]

The failure of this implementation led to the Notice being upgraded with harsher restrictions in 2021.[8] Young people were restricted to playing for an hour between 8pm and 9pm on Fridays, weekends and public holidays. The effectiveness of these heightened restrictions on use should be contextualised against the release of two pieces of draft legislation in 2023 from the Cyberspace Administration of China: one on the use of facial recognition within China,[9] and a new regulation that seeks to control access to games using an entirely different set of policy levers.[10] The development of a new set of policy levers to control access to games indicates the weakness of facial recognition for the effective management of children's use of technology.

The 2021 Chinese legislation that sought to use age verification to govern children's access to games now overlaps with other legislation that seeks a similar goal by limiting personal spending on games by anyone. This change suggests that even with the massive surveillance infrastructure and resourcing available, the use of facial recognition to manage and govern China's young people has not met the goals of the Notice and the state has sought a market solution, guiding China towards a needlessly overregulated sector, one that Australia should seek to avoid repeating. The regulations described above have hurt the gaming industry, causing Chinese gaming stocks to plunge and the market to shrink. As a result, Chinese gaming companies like Tencent have expanded their video game consumer market overseas.

In relation to protections for those who are at highest risk of online harms, care should be taken to recognise and protect positive rights to self-expression in digital environments.[11] Populations

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[5] National Press and Publication Administration. *Guoxinchu [2019] No. 34 Notice of the National Press and Publication Administration on Further Strict Management to Effectively Prevent Minors from Being Addicted to Online Games.* 25 October, 2019. Archived at https://www.waizi.org.cn/doc/120054.html

[6] May, T. and Chien, A. C. Game Over: Chinese Company Deploys Facial Recognition to Limit Youths' Play New York Times. 7 July, 2021.

[7] Zendle, D., Flick, C., Gordon-Petrovskaya, E. et al. No evidence that Chinese playtime mandates reduced heavy gaming in one segment of the video games industry. Nature: Human Behaviour 7, 1753–1766 (2023). https://doi.org/10.1038/s41562-023-01669-8

[8] National Press and Publication Administration. *Guoxinchu [2021] No. 34 Notice of the National Press and Publication Administration on Further Strict Management to Effectively Prevent Minors from Being Addicted to Online Games.* 30 August, 2021.

[9] Cyberspace Administration of China. Notice of the Cyberspace Administration of China on Soliciting Public Opinions on the "Regulations on the Security Management of the Application of Facial Recognition Technology (Trial) (Draft for Comments)" 8 August, 2023. https://www.cac.gov.cn/2023-08/08/c_1693064670537413.htm

[10] Cyberspace Administration of China. Notice of the Cyberspace Administration of China on Soliciting Public Opinions on the "Guidelines for the Construction of Mobile Internet Minors Mode (Draft for Comments)" 2 August 2023. https://www.cac.gov.cn/2023-08/02/c_1692541991073784.htm

[11] Article 19, International Covenant on Civil and Political Rights (ICCPR), General Comment No. 34, Human Rights Committee, 2011; Communication 488/1992; Resolution 32/2 Human Rights Council, 2016; UN Special Rapporteur on freedom of opinion and expression, reports: A/HRC/38/35 (2018) and A/74/486 (2019)

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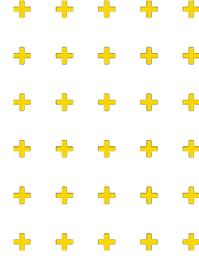
known to be highly vulnerable to online harassment and abuse (including Aboriginal and Torres Strait Islander people and LGBTIQ+ people) may feel *less* safe in digital environments where increased surveillance and/or policing are framed as safety mechanisms.[12]

As noted by the United Nations, LGBTIQ+ communities globally are increasingly targeted by discriminatory 'wedge' campaigns that falsely frame gender-diverse people as threats to the rights and safety of women and children - and these campaigns are often waged in digital environments.[13] Any increased promotion of bystander reporting (for example) should be designed cautiously, with an understanding that it may inadvertently enable these organised forms of harassment.

The decision of Meta to abandon deals under the News Media Bargaining Code

It is important to note that Meta has not abandoned deals. Instead, the existing agreements with news companies have concluded, and Meta has simply chosen to not establish new agreements with Australian publishers. The company is entitled to do this under the current operation of the News Media Bargaining Code ('Bargaining Code').

As the committee would also be aware, the government is able to respond by designating Meta, which would force negotiations between Meta and Australian news media companies to begin. Under the legislation, this may lead to a binding arbitration process. The likely outcome of this process would be that Meta chooses to remove news from Facebook as they have done in Canada.

Such a decision would align with Meta's overall change in strategic direction. A project led by ADM+S Associate Investigator James Meese,[14] which has been extended by journalists from *The Guardian*,[15] shows that engagement on news posts has trended downward since 2022. While we cannot make causal links, the findings align with Meta's public statements that they are no longer interested in news content and have changed their algorithms accordingly. Encounters with news content are incidental, and evidence points to news playing a minor role in users' overall experience of the platform.

We would encourage the committee to consider the unique nature of each digital platform. It is evident from the progress of previous bargaining rounds, and international developments (most notably in Canada), that Google values news more highly than Meta.[16] Open A.I. has also been willing to license news for their foundational models.[17]

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[12] Stardust, Z., Gillett, R. and Albury, K., 2023. Surveillance does not equal safety: Police, data and consent on dating apps. *Crime, Media, Culture*, *19*(2), pp.274-295; Albury K, Byron P, McCosker A, et al. (2019) *Safety, Risk and Wellbeing on Dating Apps*. *Final Report*. Swinburne University of Technology.

[13] UN Women (2024) *LGBTIQ+ Communities and the Anti-Rights Pushback: 5 Things to Know*. 24 May. https://unwomen.org.au/lgbtiq-communities-and-the-anti-rights-pushback-5-things-to-know/

[14] Bailo, F., Meese, J., & Hurcombe, E. (2021). The Institutional Impacts of Algorithmic Distribution: Facebook and the Australian News Media. Social Media + Society, 7(2). https://doi.org/10.1177/20563051211024963.

[15] Nick Evershed and Josh Taylor, "'News on Facebook is dead": memes replace Australian media posts as Meta turns off the tap', *The Guardian*, 6 May 2024.

[16] Bossio, D., Carson, A., & Meese, J. (2024). A different playbook for the same outcome? Examining Google's and Meta's strategic responses to Australia's News Media Bargaining Code. New Media & Society, 0(0). https://doi.org/10.1177/14614448241232296

[17] Emma Roth, 'OpenAI's News Corp deal licenses content from WSJ, New York Post and more', *The Verge*, 23 May 2024.

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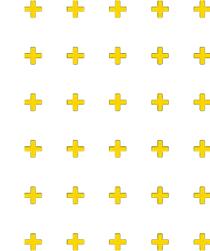
The fact that digital platforms value news content differently points to fundamental problems associated with the Bargaining Code. The model wrongly presumes that certain digital platforms consistently need news content to provide a service, and subsequently establishes an artificial market for a public good. As we have seen with Meta's recent strategic shifts and the dynamic nature of the platform ecosystem more broadly, this state of affairs does not always hold.

Research also shows that while the Bargaining Code has had some success, covering over 60% of the Australian news media sector, there were problems with its operation.[18] Interviews with editors revealed that in the absence of designation, news companies were subject to significant information asymmetry about what deals were being conducted, whereas platforms knew exactly how much they were giving to each business or outlet.[19] The Bargaining Code has also provided organisations which secured platform deals with a significant competitive advantage over those without deals. In some contexts, media companies may have also been incentivised to produce 'content that suited [a] specific platform's aims'.[20]

There are understandable concerns about Meta potentially removing news from Facebook. When it comes to accessing news on social media, Australians still predominantly turn to Facebook (32%).[21] However, research also shows that Australians are still watching television (36%) and accessing online news (28%) as their main source of news.[22] The 2024 Digital News Report shows that younger audiences have little interest in news (65% of Gen Z have low interest)[23] and are more likely to turn to Tik Tok and Instagram when looking to access news content.[24] However, it is important to note that these overarching trends have been identified in Australia since the release of the first Digital News Report in 2015. Commenting on the 2015 Australian results, Nic Newman, from the Reuters Institute for the Study of Journalism, University of Oxford who led the international survey, noted the 'drift of young people away from TV and towards online'.[25]

If Meta chose to remove news from Facebook, longer-term outcomes may not be entirely negative for larger news providers. Of note is the significant growth in downloads of the ABC Australia app following Meta's brief removal of news during the original bargaining code negotiations.[26] However we do note that there would likely be a suite of short-term negative impacts. The Canadian experience has shown that smaller news providers have been more significantly impacted by Meta's removal of news as these providers have relied upon larger platforms as key referral points[27]. Of concern also is that the removal of news has also limited the availability of disaster and emergency reporting via the platform.[28]

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[18] Bossio et al (2024), n [16] above.

[19] Ibid.

[20] Ibid.

[21] Park, S., Fisher, C., McGuinness, K., Lee, J., McCallum, K., Cai, X., Chatskin, M., Mardjianto, L. & Yao, P. (2024). Digital News Report: Australia 2024. Canberra: News and Media Research Centre, University of Canberra.

[22] Ibid, 80.

[23] Ibid, 35.

[24] Ibid, 80.

[25] Watkins, J, Park, S., Blood, W., Breen, M, Fuller, G., Papandrea, F., Ricketson, M. (2015). Digital News Report: Australia 2015. Canberra: News and Media Research Centre, University of Canberra, 19.

[26] Ian Campbell, 'Australia's ABC News shot to the top of the App Store charts following Facebook's news ban', The Verge, 20 February 2021.

[27] Kahn, G. (2023, November 7). In Canada's battle with Big Tech, smaller publishers are caught in the Crossfire. Reuters Institute for the Study of Journalism. https://reutersinstitute.politics.ox.ac.uk/news/canadas-battle-big-tech-smaller-publishers-are-caught-crossfire

[28] McLean, A., & Malachy Ryan, P. (2024, May 1). Meta's Canadian news ban could put people at risk during public emergencies. https://theconversation.com/metas-canadian-news-ban-could-put-people-at-risk-during-public-emergencies-228770

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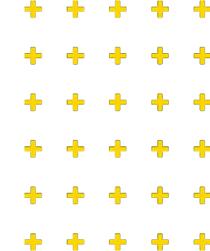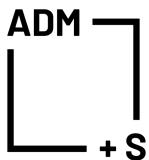
It is also worth considering the extent to which Australia wants to tie the long-term sustainability of Australian journalism to companies like Meta which have shown little interest in supporting the news sector, or the production and distribution of quality content to date. It is also important to note that the NMBC has only provided partial benefits to regional and remote news providers across Australia. The University of Canberra News and Media Research Centre notes that while some regional news media companies have secured funds, 'these deals cover only a fraction of the hundreds of regional and rural newspapers across Australia'.[29]

The Australian Government may wish to force certain platforms to carry a certain amount of Australian news content. If so, a different legislative instrument may be required.

The anxiety generated by Meta's unwillingness to continue financial relationships with Australian News media organisations exposes the fundamental unsustainability of the Bargaining Code. Early drafts of the Bargaining Code reflected a holistic effort to regulate the relationship between platforms and professional media organisations through various forms of transparency. Its final iteration, however, was a deregulatory instrument, enabling platforms to leverage cash payments into market power and stabilise their business models. By including, at the last minute, new criteria for determining whether or not a platform would be designated under the code, that required the Minister to consider whether platforms had made contributions to journalism through agreements with news businesses,[30] the Bargaining Code enabled opaque, commercial-in-confidence financial deals to mitigate public interest regulatory goals such as non-discrimination (non-differentiation) rules, transparency, and regulatory oversight. The fraying of those financial arrangements exposes the shortsighted nature of a funding model that tethered public interest journalism to the profits and whims of platform businesses. This reflects a broader problem with relying on bargaining codes under competition and consumer law without addressing underlying market and public interest issues.[31]

The Bargaining Code's entrenchment of curatorial opacity, surveillance advertising, and market efficiency as a regulatory focus also explicitly contradict the priorities of the Online Safety Act. Outcomes more aligned with eSafety priorities would flow from funding arrangements that promoted journalism's contribution to the public interest rather than funding deals that entrenched journalistic content in platform ranking and optimisation schemes organised around engagement, advertising, and generating saleable metrics. There has been considerable research directly linking behavioural advertising models with negative public outcomes such as misinformation.[32]

The Digital Platforms Inquiry *Preliminary Report* outlined a number of issues affecting news media organisations relationship with digital platforms.[33] Concerns around digital platform

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[29] McCallum, K, Park, S., Fisher, C., McGuiness. K. (2022). Submission to the House of Representatives Standing Committee on Communications and the Arts: Inquiry into Australia's regional newspapers, 18.

[30] *Competition and Consumer Act 2010* (Cth) s52E(3)(b).

[31] The ACCC and Australian Government are grappling with similar issues in relation to supermarket conduct vis a vis fresh produce suppliers and finding that a bargaining code is not sufficient on its own: see Carol Richards, Bree Hurst, Hope Johnson and Rudolf Messner, 'Supermarkets need to change the way they operate in Australia. But how do we get them to do this?', *The Conversation,* 10 April 2024.

[32] Karen Hao, 'How Facebook and Google fund global misinformation' MIT Technology Review (November 20, 2021) available <https://www.technologyreview.com/2021/11/20/1039076/facebook-google-disinformation-clickbait/?s=0>; Clare Melford and Craig Fagan, 'Cutting the Funding of Disinformation: The Ad-Tech Solution' Global Disinformation Index (May 2019).

[33] ACCC, *Digital Platforms Inquiry Preliminary Report* (2018).
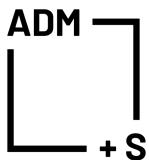
bargaining power primarily related to the capacity to enforce policies unilaterally and maintain information asymmetry. The *Preliminary Report* identified news media organisation's anxieties around rankings and curatorial opacity, as well as asymmetrical access to user data that was inhibiting news media organisations aspirations to become ad platforms in their own right.[34] There was no discussion of commercial arrangements or financial contributions. The solution proposed in the *Preliminary Report* was holistic regulatory oversight to remedy the absence of transparency.

The *Preliminary Report* also drew on a range of commissioned investigations into alternative funding models for public interest journalism and requested feedback on solutions including: grants to small and regional publishers, tax offsets to support public interest journalism, and tax deductions for subscription based models. The *Final Report* however, with little explanation, suggested tax arrangements were an inefficient way to address under-provision of public interest journalism.[35] Instead, the ACCC preferred a Bargaining Code that (initially) included regulatory oversight alongside a mechanism for funding journalism. However, the final form of the Bargaining Code ultimately privileged financial arrangements over regulatory oversight in ways that made Australian news media organisations reliant on the profits of behavioural advertising and more subject to the whims of platform business practices.

The important role of Australian journalism, news and public interest media in countering mis and disinformation on digital platforms

Australian journalism, news and public interest media currently play both constructive and less constructive roles in the circulation of mis- and disinformation, largely as a consequence of their use of social media platforms as distribution and audience-building channels.

- Responsible reporting can provide critical analysis of and more thoughtful context for misinformation that is circulating via social media, including via explainer articles and expert commentary.

- However, pathways for the circulation of mis- and disinformation are complex, and can be dramatically amplified by irresponsible or biased reporting by mainstream media outlets.

- The practice of sourcing stories *from* social media, including by reporting on viral TikTok videos or Twitter controversies, is a key source of this amplification.

Additionally, independent fact-checking organisations continue to perform a critical function. While these organisations are not always based within newsrooms, they conduct journalistic activities and have more of a direct impact on limiting the circulation of mis/disinformation than the general provision of news and public interest media.

Several fact-checkers operate in Australia. These include International Fact-Checking Network signatories (IFCN) - AAP, AFP, RMIT Fact Lab and ABC News - and other well-known non-accredited organisations (First Draft News and Crikey). The global field has been refining

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[34] See e.g. https://newscorp.com/2017/12/05/news-corp-launches-news-iq/.
[35] ACCC, *Digital Platforms Inquiry Final Report* (2019).

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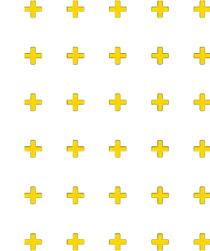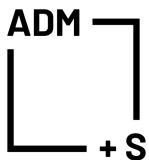
identification techniques, monitoring, verification and the correction of mis/disinformation.[36] These organisations also align with many of the platform moderation policies and help flag or remove harmful content, particularly in response to critical events such as COVID-19 or major national debates like The Voice Referendum. With some exceptions (for example, the ABC), these organisations receive funding from Meta or Google as well as access to platform tools to verify, flag and intervene in cases where information has harmful consequences. It is worth noting that despite the central role that these organisations play in the wider information ecosystem, they are mostly dependent on funding from digital platforms and donations for revenue.

Australian fact checkers actively collaborate with other accredited global organisations through the IFCN, to trial and improve tools for detection processes. For example, the Full Fact tool (https://fullfact.org/ai/) facilitates claim hunting online. Platforms are increasingly using algorithmic systems and artificial intelligence tools to address mis/disinformation. These approaches reduce the need for human labour and help with the efficient use of limited resources across fact-checking organisations but little transparency is provided about how these operate.[37] Fact-checkers have called on platforms to offer more details about the use of these tools.[38]

Recent research from ADM+S member Timothy Graham highlights the complex role that news and public interest media played in shaping public discourse during the Voice to Parliament referendum.[39] In addition to mis- and disinformation, we draw to attention the circulation of rumours and narrative framing lacking secure standards of evidence that came to dominate news headlines and social media platforms such as X (formerly Twitter) during the referendum.[40] A key finding from this research is that problematic content does not always consist of false content or assertions. Indeed, rumours and unevidenced narratives are designed to elicit discord, confusion, and distrust and are notoriously difficult to verify or fact-check. This is largely because such content emerges from collaborative work between fringe activists, online influencers, and partisan news media, which often involves decontextualising sources.

In a topic model analysis of over 360,000 posts on X between 1st January and 14th October 2023, we found that unsubstantiated rumours and unverified information dominated the public discussions around The Voice, attracting both support and dissent. For example, during the nine months of data under examination in our study, we highlighted the attention given to Senator Hanson's and Senator Price's claims that the Uluru Statement from the Heart is 26 pages long and contains a list of secret demands, obtained by a Freedom of Information (FOI) request. This attention came from news media across the political landscape as well as through social media platforms. This particular claim, initially publicised by *Sky News* host Peta Credlin, was fact-

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[36] Thomson, T. J., Angus, D., Dootson, P., Hurcombe, E., & Smith, A. (2020). Visual Mis/disinformation in Journalism and Public Communications: Current Verification Practices, Challenges, and Future Opportunities. *Journalism Practice*, *16*(5), 938–962. https://doi.org/10.1080/17512786.2020.1832139; Montaña-Niño,S., Riedlinger, M., Joubert M.,García-Perdomo, V., Watt, N.,van Zuydan, L. (In press) Explainers, platform vernaculars and checktainment: An analysis of Facebook fact-checking posts in the Global South. In de Lima-Santos & Kooli A, *Fact-checking in the Global South.* Palgrave.

[37] Thomson, T. J., Angus, D., Dootson, P., Hurcombe, E., & Smith, A. (2020). Visual Mis/disinformation in Journalism and Public Communications: Current Verification Practices, Challenges, and Future Opportunities. *Journalism Practice*, *16*(5), 938–962. https://doi.org/10.1080/17512786.2020.1832139

[38] Full Fact, *The Full Fact Report 2020: Fighting the causes and consequences of bad information* (2020).

[39] Timothy Graham, Discovery Early Career Researcher Award (DECRA), *Combatting Coordinated Inauthentic Behaviour on Social Media* (DE220101435).

[40] Graham, T. (n.d.). Exploring a post-truth referendum: Australia's Voice to Parliament and the management of attention on social media. *OSF Preprints*. https://osf.io/erzda

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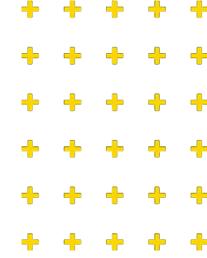
checked by a number of organisations including *SBS News* and AAP,[41] yet such fact-checking efforts do not appear to have impacted the spread and this narrative was amplified uncritically by news media and politicians.

Similarly, research led by ADM+S member Axel Bruns and a team at QUT found that COVID-era mis- and disinformation, such as the entirely false claim that 5G telephony technologies caused or exacerbated the COVID-19 symptoms, usually circulated only amongst small fringe groups of conspiracy theorists, until and unless they were endorsed by entertainment and sporting celebrities and/or fringe political actors, and then amplified by the coverage of such celebrity statements in mainstream (and especially entertainment and tabloid) media.[42] This highlights a severe lack of gatekeeping and fact-checking routines, and indeed of basic journalistic training and responsibility, in some such mass-audience media organisations, which materially aids the circulation of mis- and disinformation. It is also being exploited by fringe political actors, who deliberately make controversial statements and even promote disinformation to attract mainstream media coverage. Like many of their overseas counterparts, even major Australian media outlets have yet to realise that such blatant media-baiting seeks to instrumentalise them in the amplification and dissemination of mis- and disinformation.

This research highlights the problem that fact-checking organisations face when trying to 'keep up' with a high volume of unverified pseudo-events and rumour bombs during key events such as referendums and elections. News media organisations and politicians are evidently central to the production and circulation of content that, while not explicitly false, often leads to misperceptions and polarised discussions on social media. Approaches to intervening ought to focus not only on the content of questionable public communication but also the strategies and incentives driving it, including how we might begin to map and hold accountable privileged actors in the public sphere for what they publish and how it is received and acted upon by audiences.

The algorithms, recommender systems and corporate decision making of digital platforms in influencing what Australians see, and the impacts of this on mental health

There is very little systematic knowledge about how platforms' algorithms, recommender systems and business tactics influence what Australians see (or hear), as this would require not only more transparency from platforms, but more involvement of Australian citizens and consumers in sharing their experiences. It is important to consider the cumulative effects of algorithmic recommendation, given the interplay that takes place across platforms. New and ongoing research projects and infrastructure across the ADM+S Centre are making progress in developing the methods and tools to undertake this work, these include:

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[41] William Summers, 'Hanson Wrong to Claim MPs would have to consult the Voice', AAP Factcheck, 9 August 2023.

[42] Bruns, A., Harrington, S., & Hurcombe, E. (2020). 'Corona? 5G? Or Both?': The Dynamics of COVID-19/5G Conspiracy Theories on Facebook. *Media International Australia*, *177*, 12–29. http://doi.org/10.1177/1329878X20946113

Bruns, A., Harrington, S., & Hurcombe, E. (2021). Coronavirus Conspiracy Theories: Tracing Misinformation Trajectories from the Fringes to the Mainstream. In M. Lewis, E. Govender, & K. Holland (Eds.), *Communicating COVID-19: Interdisciplinary Perspectives* (pp. 229–249). Cham: Springer. http://doi.org/10.1007/978-3-030-79735-5_12

Bruns, A., Hurcombe, E., & Harrington, S. (2022). Covering Conspiracy: Approaches to Reporting the COVID/5G Conspiracy Theory. *Digital Journalism*, *10*(6), 930–951. http://doi.org/10.1080/21670811.2021.1968921

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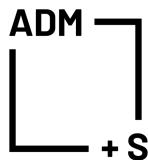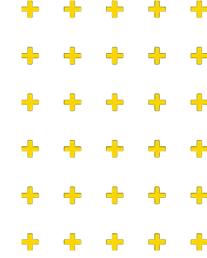
- The Automated Cultural Curation project

- The Australian Search Experience project

- The Australian Ad Observatory

- The Australian Internet Observatory

Automated Cultural Curation project

Media viewing preferences and search patterns, for example, can influence the type of news content foregrounded in social media feeds (and vice versa). Increasingly, automated systems shape the overall media environment in which people are immersed in ways that are non-transparent to users but which reflect the commercial imperatives of overseas platforms. Given the role played by news and culture in democracy and civic life, it becomes increasingly important to understand how customised forms of automated curation shape Australians' media worlds. The Automated Cultural Curation project hosted in the ADM+S Centre will draw upon public data donation and on the creation of synthetic digital "personas" to assess the cumulative effect of algorithmic recommendation and sorting across news, search, social media, and audio and video content.

The Australian Search Experience project

The Australian Search Experience has analysed the presence of Australian news domains on Google News. We found that while Australian news organisations were well-represented for some search terms (such as names of politicians or political parties), other relevant search terms at the time of collection (such as COVID or Lockdown) returned predominantly international domains like *The New York Times* or *CNN*.[43]

For search terms focused on Australian politics, the search results returned a mixture of major news websites from a left-wing outlet (The Guardian Australia) and a public service media organisation (ABC) to Sydney's centrist broadsheet newspaper (Sydney Morning Herald), a tabloid (Daily Mail), a general news website (news.com.au), and the right-wing Sky News Australia. This largely replicates the status quo of the Australian news market. Google News offers Australian users a range of approaches to coverage as well as a variety of viewpoints when accessing political news, but neither substantially increases nor limits the news they might encounter elsewhere.

The Australian Ad Observatory

The Australian Ad Observatory[44] has used novel data donation methodologies to provide unprecedented insights into the online advertising experience of Australian Facebook users,

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[43] Meese, J, Obeid, A, Angus, D, Bruns A. (2023) Measuring Intermediary News Diversity: Google News in Australia, ADM+S Working Paper Series 2023 (7), ARC Centre of Excellence for Automated Decision-Making and Society, DOI: 10.25916/xk6y-a642. More advanced analyses are currently under review but can be made available to the committee on request.
[44] https://admscentre.org.au/adobservatory
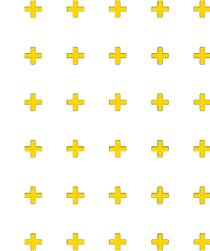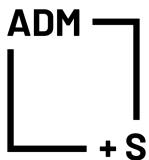
identifying a number of concerning patterns of ad targeting including to vulnerable consumers (discussed further in relation to harmful or illegal content, Topic 5, below).

The recommender systems that drive targeted advertising on digital platforms affect the wellbeing of Australians. For example, alcohol advertising has a significant impact on our wellbeing. In our research we have found alcohol companies published almost 40,000 unique ads on Meta platforms per year.[45] The crucial issue though is not just the content and volume of these ads, but how recommender systems are tuned to target them disproportionately toward 'high volume' or 'high interest' consumers who may be most at risk. Alcohol companies sell more than a third (36%) of all alcohol sold in Australia to 5% of people[46], and use the algorithmic advertising models of digital platforms to more frequently target Australians who drink at high-risk levels.[47] Our research has found that social media platforms tag young Australians, including children, with advertising interests for harmful and addictive products.[48]

The Australian Internet Observatory

The newly launched, federally funded Australian Internet Observatory (funded by NCRIS through the ARDC)[49] will enable such work to be scaled further to a national level. Initiatives like the Australian Internet Observatory are a crucial step change that move beyond transparency initiatives that provide archives or libraries of content published on platforms. The shift to observatories enables us to better understand how algorithmic recommender systems target Australians in ways that shape their information environment and affect their wellbeing. Observatories lead us toward bringing into view the automated processes that make digital platforms powerful.[50] In parallel, a new ARC Discovery Project led by QUT is building data donation pipelines to enable us to observe and analyse Australian experiences of TikTok's recommender system for the first time.

Other issues in relation to harmful or illegal content disseminated over social media, including scams, age-restricted content, child sexual abuse and violent extremist material

While discussion of harmful and illegal content often focuses on user generated content, harmful and illegal content can also form a substantial component of the everyday advertising content served to Australians by social media. The Australian Ad Observatory[51] has used novel data donation methodologies to provide unprecedented insights into the online advertising experience of Australian Facebook users, identifying harmful or illegal advertising content that

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[45] Hayden L, Brownbill A, Angus D, Carah N, Tan XY, Dobson A, Robards B. Alcohol advertising on social media platforms – A 1-year snapshot Canberra: Foundation for Alcohol Research and Education; 2023 Mar. Available from: https://fare.org.au/alcohol-advertising-on-social-media-platforms/

[46] Cook M, Mojica-Perez Y, Callinan S. Distribution of alcohol use in Australia Bundoora: Centre for Alcohol Policy Research, La Trobe University; 2022. Available from: https://fare.org.au/wp-content/uploads/CAPR-report-Distribution-of-alcohol-use-in-Australia.pdf

[47] Coomber K, Baldwin R, Taylor N, Callinan S, Wilkinson C, Toumbourou JW, Chikritzhs T, Miller PG. Characteristics of high- and low-risk drinkers who use online alcohol home delivery in Western Australia. Drug Alcohol Rev. 2024;43(2):407-15. doi:10.1111/dar.13783

[48] VicHealth. Dark marketing tactics of harmful industries exposed by young citizen scientists: VicHealth; 2022. Available from: https://www.vichealth.vic.gov.au/media-and-resources/citizen-voices-against-harmful-marketing

[49] https://internetobservatory.org.au/

[50] Carah, N., Hayden, L., Brown, M.G., Angus, D., Brownbill, A., Hawker, K., Tan, J., Dobson, A., Robards, B. (2024). Observing 'tuned' advertising on digital platforms. *Internet Policy Review*. https://policyreview.info/articles/analysis/observing-tuned-advertising-digital-platforms

[51] https://admscentre.org.au/adobservatory
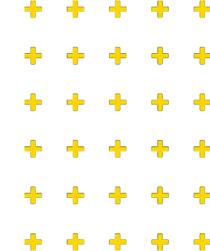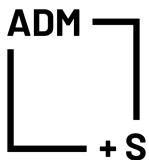
includes unlawful scam content, harmful and, in some cases, potentially unlawful gambling advertising, and concerning patterns of alcohol (also discussed above in Topic 4) and unhealthy food advertising. While many social media platforms have policies against serving unlawful and harmful advertising content to Australians, in some cases, advertising that should not be allowed by the social media platforms' policy and is or may be unlawful, such as scam content and some gambling advertising, has still been served to Australians. In other cases potentially harmful advertising, such as for alcohol, gambling and unhealthy food, has been targeted at vulnerable consumers such as young people.

Social media platforms typically rely on advertising for revenue. Each ad impression is embedded at a particular point in a person's content feed according to an automated set of computations, which match an advertiser's desired audience and price. This process relies on the vast amount of data about user characteristics and behaviours collected by the platforms, data brokers and advertisers themselves.[52] This programmatic advertising model gives advertisers the ability to finely target and tune the placement, and even the precise content and tone, of ads to capture attention (based on time spent looking) and engagement (via clicks and likes).[53] The speed, scale and integration of machine learning into social media allows platforms and advertisers to learn in real time how users respond in order to more effectively and finely tune the flow of content and ads. Because online ads are ephemeral, served via automated computations that are not directly observable, and are often only seen by the people to whom they are specifically targeted, it is difficult to explain how it is that ads on social media are targeted and to hold advertisers and platforms accountable for harmful patterns of advertising.[54] Efforts towards improving transparency, such as ad libraries, are hampered by their voluntary and self-regulatory nature.[55]

The Ad Observatory enlists the help of adult volunteers from the Australian public who automatically donate ads directly from their own Facebook feed as they browse. People elect to participate in the Ad Observatory by answering a short demographic survey (including age and gender) and installing a browser plugin. Data collected about the ads include ad text, image and/or video content, and the time range of the observation. This enables researchers in the Ad Observatory team to investigate the content and targeting of social media ads as they are served to individuals in their private feeds, not just as displayed on brands' public websites and social media pages. Since its launch in October 2021, over 1,909 research participants have contributed more than 737, 000 separate 'observations' (individual impressions) of more than 328,000 unique Facebook ads to the Ad Observatory.[56]

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[52] Beauvisage, T., Beuscart, J.-S., Coavoux, S., & Mellet, K. (2023). How online advertising targets consumers: The uses of categories and algorithmic tools by audience planners. *New Media & Society*, 14614448221146174. https://doi.org/10.1177/14614448221146174.

[53] Carah, N., Hayden, L., Brown, M.G., Angus, D., Brownbill, A., Hawker, K., Tan, J., Dobson, A., Robards, B. (2024). Observing 'tuned' advertising on digital platforms. *Internet Policy Review*. https://policyreview.info/articles/analysis/observing-tuned-advertising-digital-platforms; Paterson, J. M., Chang, S., Cheong, M., Culnane, C., Dreyfus, S., & McKay, D. (2021). The Hidden Harms of Targeted Advertising by Algorithms and Interventions from the Consumer Protection Toolkit. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3993496

[54] Burgess, J., Andrejevic, M., Angus, D., & Obeid, A. K. (2022). The Australian Ad Observatory: Background paper. ARC Centre of Excellence for Automated Decision-Making and Society Working Paper Series. Analysis & Policy Observatory https://doi.org/10.25916/7BGE-BP35; Rieder B, Hofmann J. 2020 Towards platform observability. Internet Policy Review 9(4).

[55] Hawker, K., Carah, N., Angus, D., Brownbill, A., Tan, J., Dobson, A., & Robards B. (2022). *Advertisements on digital platforms: How transparent and observable are they?* Foundation for Alcohol Research and Education (FARE).

[56] Angus, D., Obeid, A. K., Burgess, J., Parker, C., Andrejevic, M., Bagnara, J. *et al.* (2024a) *The Australian Ad Observatory: Technical and data report (Australia) [Working paper]*. ARC Centre of Excellence for Automated Decision-Making and Society. Available at: https://apo.org.au/node/326310

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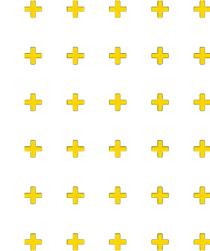
In soon to be published research using the Ad Observatory ADM+S researchers Mark Andrejevic and Chris O'Neill have been able to identify more than one hundred **unlawful scam ads** showing photoshopped pictures of celebrities such as David Koch and advertising unlawful 'get rich quick' style scams.[57] These ads are clearly unlawful and the Australian Competition and Consumer Commission is currently seeking to take enforcement action against Meta for allowing ads like these to continue to appear in such numbers and causing such harm on their site.[58]

In our research on **gambling** advertising in the Ad Observatory that was published in Addiction Research and Theory and also reported by the ABC, our research team uncovered gambling advertising served to Australians by BitStarz on Facebook. This advertising is problematic because BitStarz is an online offshore casino registered in the Dutch Caribbean Island of Curaçao, that cannot legally operate or advertise in Australia.[59] Our research identified loopholes in the Australian law that make it difficult to hold either BitStarz or Meta accountable for this otherwise unlawful advertising when it appears on a social media platform like Facebook. Facebook, and some other platforms, do have their own internal policies that prohibit online casinos from targeting advertising in jurisdictions where it is illegal, like Australia. But our research suggests, these internal policies and procedures do not always work, despite the enormous information and resources social media platforms have at their disposal. Our research reinforces the need for reforms to Australian law to close the loophole that makes platforms unaccountable for illegal advertising online. This could be done by following the lead of the 2022 European Union *Digital Services Act* which would give the Australian Communications and Media Authority the power to issue social media platforms with 'notice and takedown' orders to remove unlawful advertising.

Advertising on social media is an important pipeline for **promoting gambling to young people**. In our study of gambling ads on Facebook, our provisional research findings have identified three important gambling ad issues in Australia. In further research on the gambling ads in the Australian Ad Observatory we are finding that the vast majority of gambling ads on Facebook are for 'sports betting' from a limited number of legally compliant gambling providers. Secondly, there is a small but significant amount of 'grey zone' gambling ads that have an uncertain degree of compliance with Australian law. Some are clearly unlawful, yet circulated on Facebook and Instagram, while others remain lawful yet target users with gambling-like systems such as raffle "rewards clubs" without clearly identifying themselves as a gambling service. This has the potential to confuse or frustrate users and parents who may be surprised by gambling materials being advertised to young people in an apparently legally-compliant manner. Thirdly, initial findings suggest that social media gambling ads work by identifying target users who are then

[57] This work is currently in the process of being published. Some of the findings have been reported by the ABC: Casey Briggs, 'Inside the world of fake scam ads' 5 November 2023, ABC news Online at https://www.abc.net.au/news/2023-11-06/celebrity-crypto-scams-kochie-wilkins/103061608; Casey Briggs, 'Fake celebrity scam ads hijack Facebook accounts to target Australians' 18 November 2023, ABC news Online; at https://www.abc.net.au/news/2023-11-18/celebrity-scam-ads-hijacking-facebook-accounts/103111094
[58] Liam Harding, Jeannie Paterson and Elise Bant, ACCC v Big Tech Round 10 and counting' 24 March 2022, Pursuit at https://pursuit.unimelb.edu.au/articles/accc-vs-big-tech-round-10-and-counting; https://www.accc.gov.au/media-release/accc-takes-action-over-alleged-misleading-conduct-by-meta-for-publishing-scam-celebrity-crypto-ads-on-facebook
[59] Parker, C., Albarrán-Torres, C., Briggs, C., Burgess, J., Carah, N., Andrejevic, M., ... Obeid, A. (2023). Addressing the accountability gap: gambling advertising and social media platform responsibilities. *Addiction Research & Theory*, 1–7. https://doi.org/10.1080/16066359.2023.2269852; Christine Parker and Cesar Albarrán-Torres, The Facebook trick online gambling is using to target Australians, 5 February 2024, https://pursuit.unimelb.edu.au/articles/the-facebook-trick-online-gambling-is-using-to-target-australians?in_c=articlelistingblock
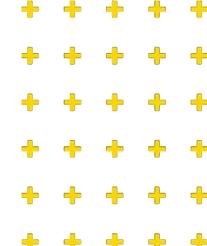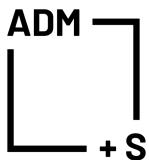
subjected to gambling ad 'bursts', often related to when a user first logs in to social media. A burst is defined here as a sequence of ads shown to a user in one single browsing session, where at least half of these ads tend to focus on one particular product or market segment. These ad bursts are hypothesised as representing as much as 70% of a user's initial ad feed, overwhelming other kinds of advertising, suggesting that gambling ads are paid for as a premium to be prioritised over other types of advertising. These bursts may potentially lead to users taking on undue financial risks, or else developing, triggering, or relapsing an addiction.

Another area of potentially harmful advertising on social media is **unhealthy food advertising,** especially unhealthy food advertising targeted at children and young people. The Commonwealth Government is currently considering prohibiting unhealthy food advertising online. Research by Christine Parker, Tanita Northcott, Daniel Angus and Abdul Obeid on unhealthy food advertising from the Ad Observatory[60] found that even though Facebook accounts are available only to people 13 and over, unhealthy food advertising frequently uses child-oriented themes and appears to be designed to appeal directly to children. This is consistent with previous research by ADM+S member Nic Carah and colleagues showing that food marketing across media settings is frequently designed to appeal to children,[61] and that children are frequent users of digital platforms, often without parental consent and despite official age restrictions.[62] The research also identified numerous examples of ads designed to appeal to parents and carers who need a quick convenient snack or meal for their children, which is also likely to impact children's food environment and choices. The Ad Observatory sample does not include children under 18, but the research did identify that young people, and especially young men aged 18-24, are targeted with unhealthy food, predominantly fast food, ads more than other demographic. Previous research has shown that young people are acutely vulnerable to the harms of unhealthy food marketing, particularly in immersive digital environments that attract their attention.[63]

The Australian Ad Observatory is also extending research on how **alcohol** advertising targets Facebook users. Social media platforms challenge existing regulatory guidelines for the marketing of alcohol because the frequency of exposure and targeting information is not transparent. Research by Nicholas Carah and colleagues identified repetitive exposure of alcohol advertising on evenings and weekends in sequences of ads donated by Australian Ad Observatory participants, which is otherwise obscured in existing 'ad libraries' such as those provided by Meta.[64] Digital platforms' advertising systems aim to identify users who are most likely to click on displayed ads, for example people who either buy alcohol products frequently

[60] Northcott, T; Sievert, K; Russell, C; Obeid, AK; Angus, D, Parker, C; (2024). Unhealthy food advertising on social media: Policy lessons from the Australian Ad Observatory. The University of Melbourne. Preprint. https://doi.org/10.26188/26089525.v1

[61] Robards, B., Carah, N., Rangiah, L., Roberts, S., De Lazzari, C., Brown, M.-G., Elliott, K., Tanner, C., Savic, M., & Dobson, A. (2023). *The Social Media & Unhealthy Marketing Project: Final Report.* Monash University, The University of Queensland & Vichealth. https://espace.library.uq.edu.au/view/UQ:34f3ef1

[62] Boyland, E. *et al.* (2022) 'Association of Food and Nonalcoholic Beverage Marketing With Children and Adolescents' Eating Behaviors and Health: A Systematic Review and Meta-analysis', *JAMA Pediatrics*, 176(7), p. e221037. Available at: https://doi.org/10.1001/jamapediatrics.2022.1037

[63] Robards, B., Carah, N., Rangiah, L., Roberts, S., De Lazzari, C., Brown, M.-G., Elliott, K., Tanner, C., Savic, M., & Dobson, A. (2023). *The Social Media & Unhealthy Marketing Project: Final Report.* Monash University, The University of Queensland & Vichealth. https://espace.library.uq.edu.au/view/UQ:34f3ef1; Van der Bend, D.L.M. *et al.* (2022) 'Making sense of adolescent-targeted social media food marketing: A qualitative study of expert views on key definitions, priorities and challenges', *Appetite*, 168, p. 105691. https://doi.org/10.1016/j.appet.2021.105691.

[64] Carah, N., Hayden, L., Brown, M.G., Angus, D., Brownbill, A., Hawker, K., Tan, J., Dobson, A., Robards, B. (2024). Observing 'tuned' advertising on digital platforms. *Internet Policy Review.* https://policyreview.info/articles/analysis/observing-tuned-advertising-digital-platforms
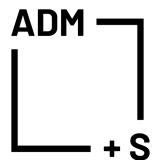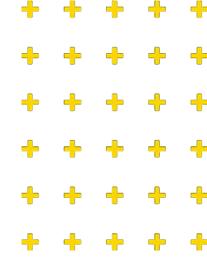
or in high quantities. Therefore, these advertising systems disproportionately target people most at risk of harm from these products by design. Ongoing research in collaboration with the Foundation for Alcohol Research and Education found two-thirds of alcohol retailer advertisements on Facebook in Australia prompt users with a 'shop now' button, minimising the barriers between seeing an ad and making a purchase. Frequent exposure and integrations with alcohol sale exacerbates potential harms of alcohol advertising on social media platforms.

The ADM+S Ad Observatory analysis shows that it is, in principle, feasible to use methods and infrastructures such as those developed by the Australian Ad Observatory to unlock possibilities for observability, and in turn, accountability, of both advertisers and the platforms themselves.[65]

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[65] Burgess, J., Andrejevic, M., Angus, D., & Obeid, A. K. (2022). The Australian Ad Observatory: Background paper. ARC Centre of Excellence for Automated Decision-Making and Society Working Paper Series. Analysis & Policy Observatory https://doi.org/10.25916/7BGE-BP35