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Fake News and The Economy of Emotions

Problems, causes, solutions

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Abstract

This paper examines the 2016 US presidential election campaign to identify problems with, causes of, and solutions to fake news. This paper examines the 2016 US presidential election campaign to identify problems with, causes of, and solutions to fake news. This paper examines the 2016 US presidential election campaign to identify problems with, causes of, and solutions to fake news.

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We analyse the contemporary fake news phenomenon that emerged during the 2016 US presidential election campaign battle between Donald Trump and Hillary Clinton, as pro-Trump fake news stories spread across Facebook. Definitions of fake news abound, including “propaganda entertainment” (Khaldarova and Pantti [2016](#), 893); “using satire to discuss public affairs” (Marchi [2012](#), 253); and content that “blurs lines between nonfiction and fiction” (Berkowitz and Schwartz [2016](#), 4). More comprehensively, Wardle ([2017](#)) deconstructs fake news into seven categories: false connection (where headlines, visuals or captions do not support the content); false context (genuine content shared with false contextual information); manipulated content (genuine imagery/information manipulated to deceive); misleading content (misleading use of information to frame an issue or individual); imposter content (genuine sources are impersonated); fabricated content (100 per cent false, designed to deceive and harm); and satire/parody (with potential to fool but no intention to cause harm) (Wardle [2017](#)). Distilling Wardle’s ([2017](#)) typology, we define fake news as either wholly false or containing deliberately misleading elements incorporated within its content or context. A core feature of contemporary fake news is that it is widely circulated online (Bounegru et al. [2017](#), 8) where people accept as fact “stories of uncertain provenance or accuracy” (Culture, Media and Sport Committee [2017](#)).

We begin by assessing social and democratic problems with contemporary fake news, and proceed to examine solutions offered by companies such as Facebook. We argue that, at heart, the fake news problem concerns the economics of emotion: specifically, how emotions are leveraged to generate attention and viewing time, which converts to advertising revenue. We further point out the economic and political incentives to produce automated fake news

that reach within social networked technologies that perform “empathic media”. This is gauged by coding, sentiment analysis, and enhanced capacity to influence. This analysis is a near-horizon conclusion and com-



Huberman, and Saldana [2014](#)), we thematically code each image to identify its key message, noting the caption, visual image and Breitbart's accompanying comment and hashtag on Facebook. We found that the emergent themes frequently focused on the candidates' personalities, the news media, the voters and policy issues. While the captioned images merit a separate paper to delve into their rich semiotic and multi-modal construction, due to reasons of space we summarise our qualitative findings with a table that illustrates commonly occurring themes (five occurrences or more) (Table 1). Given our paper's focus, we were particularly alert to whether these themes (1) contribute to the fake news discourse; and (2) stimulate and affectively engage audiences—these aspects are discussed in a later section on social and democratic problems.

TABLE 1 Main repeated themes in Breitbart's Facebook Timeline Photos (1 October to 7 November 2016)

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We enrich our case study with conversations with technologists, journalists, editors and analytics firms conducted across seven days in March during the Interactive portion of the 2017 South-by-South West (SXSW) event. This globally renowned, annual technology conference, trade fair and festival presents cutting-edge practices and ideas capable of transforming the future of entertainment, culture and technology. Through 17 hour-long interactive panel and solo sessions from journalism, marketing, government and the technology industry, we asked questions, debated and ascertained current thinking and practice

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focus of persuasion and influence efforts, given their professional commitment to accuracy, facticity and, in some cases, impartiality and objectivity. Thus, information imparted via news (or what looks like news) confers credibility and truth to the content. The twentieth and twenty-first centuries have seen PR firms spinning, or sometimes wholly fabricating, news stories for their clients (Miller and Dinan [2008](#); Leveson Inquiry [2012](#)). Whether for economic or political gain, fake news in some form has long been with us, the product of professional persuaders. However, the digital media ecology has proliferated, democratised and intensified the scale of fake news. We argue, below, that the contemporary fake news phenomenon is a logical outcome of five features of the digital media ecology: the financial decline of legacy news; the news cycle's increasing immediacy; the rapid circulation of misinformation and disinformation via user-generated content and propagandists; the increasingly emotionalised nature of online discourse; and the growing number of people financially capitalising on algorithms used by social media platforms and internet search engines.

Firstly, journalism has suffered from declining paying audiences, and hence revenue, for over a decade. Audiences have become disloyal to legacy news brands, and less willing to pay for news given the proliferation of free news online (Reuters Institute [2016](#)). Shrinking paying news audiences reduces revenue from cover prices and from advertisers. While total digital advertising spending has grown in recent years, legacy news organisations have not benefited. Rather, most digital advertising revenue (65 per cent in 2015) goes to five technology companies—four of which (Facebook, Google, Yahoo and Twitter) integrate news into their offerings (Pew Research Center [2016](#)). As legacy news outlets have struggled to profit across the past decade, they have been closing and reducing staff (Pew Research Center [2016](#)).

The second feature of the digital media ecology is the increasing immediacy of news. The 24-hour news cycle (see [Miller and Dinan 2009](#)) given the advent of social media has made news a breaking news platform. This has led to a thinner, more emotionalised news cycle. The 'press' has become more of a 'press' of practitioners and practitioners of 'breaking stories'.

A third feature of the digital media ecology is the increasing circulation of misinformation and disinformation. The creation of user-generated content and the sharing of content has led to the circulation of misinformation and disinformation. See [Miller and Dinan 2008](#) and [Leveson Inquiry 2012](#).



A fourth feature of contemporary media is that it is increasingly emotionalised (Richards 2007). This is especially so online, as, for various reasons, including anonymity, people are less inhibited online (see Suler's [2016] "online disinhibition effect"). This is fertile ground for the rise of targeted media content and news contexts (such as filter bubbles in the form of Facebook news feeds) that elicit affective reactions.

A fifth feature of the contemporary digital media ecology is the growing number of people profiting from online behavioural advertising. For them, fake news acts as clickbait, namely Web content designed to generate attention and online advertising revenue at the expense of quality or accuracy, relying on sensationalist headlines or eye-catching pictures to attract click-throughs and shares. Journalists traced a significant amount of the fake news upsurge on Facebook during the 2016 US presidential election campaign to computer science undergraduates and teenagers in Veles, Macedonia who launched multiple US politics websites (estimates range from dozens to 140) with American-sounding domain names like USADailyPolitics.com, WorldPoliticus.com and DonaldTrumpNews.co (Kirby 2016; Silverman and Alexander 2016; Gillin 2017). The fake news stories generated large, engaged audiences, earning some students thousands of euros daily through digital advertising (Kirby 2016). Most of the Veles locals created fake news stories for money rather than propaganda (Tynan 2016): their experiments with left-leaning content simply under-performed compared to pro-Trump content on Facebook. Other profit-oriented fake news genres also proliferate, including health and well-being sites (Silverman and Alexander 2016); and sites where US celebrities praise a small, US town for its helpful people and promising blockbusters filming nearby, apparently micro-targeting these town residents to gain advertising clicks (Gillin 2017).



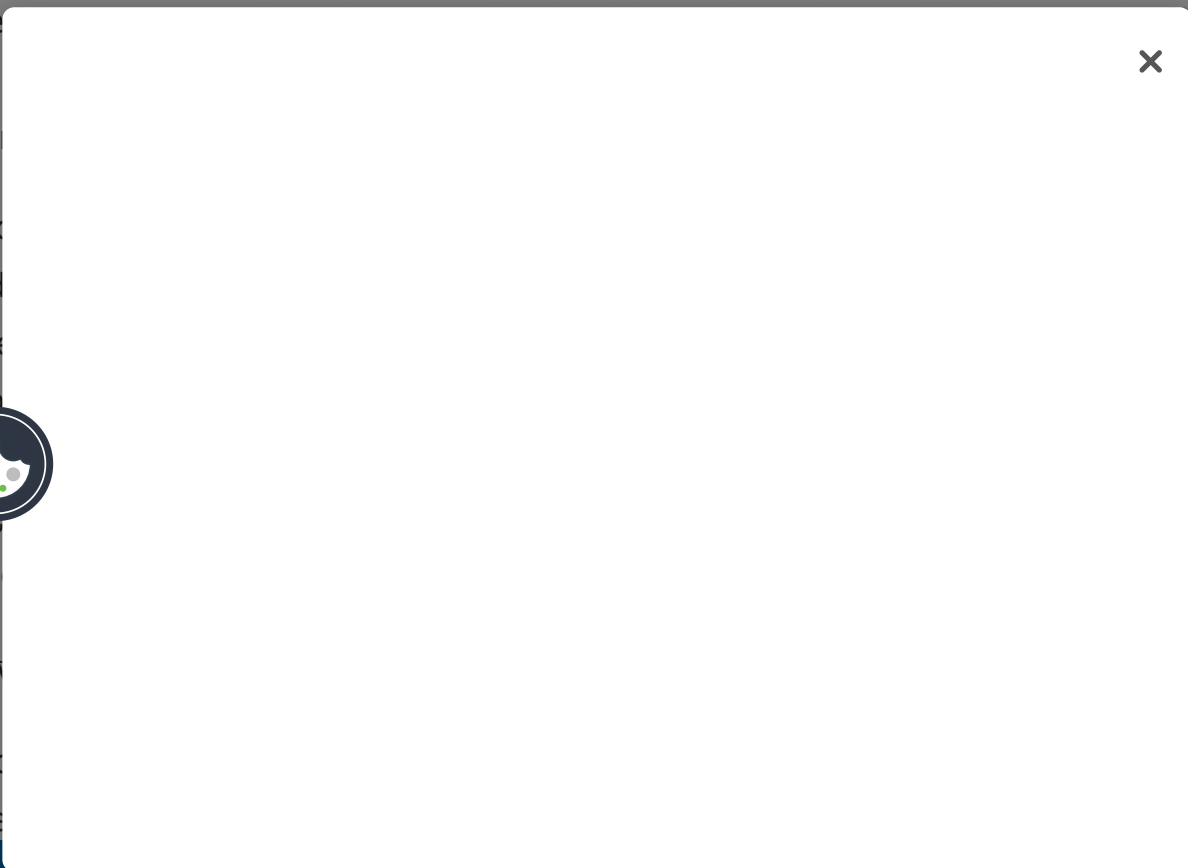
exist where information, ideas or beliefs are amplified and reinforced by communication and repetition inside a defined system where competing views are underrepresented (Sunstein [2001](#)). Algorithmically created echo chambers, or “filter bubbles”, arise when algorithms applied to online content selectively gauge what information a user wants to see based on information about the user, their connections, browsing history, purchases, and what they post and search. This results in users becoming separated from exposure to wider information that disagrees with their views (Pariser [2011](#)). A closely related psychological phenomenon is “confirmation bias”, or people’s tendency to search for, interpret, notice, recall and believe information that confirms their pre-existing beliefs (Wason [1960](#)). Empirically demonstrated consequences of algorithmically created filter bubbles and human confirmation bias are limited exposure to, and lack of engagement with, different ideas and other people’s viewpoints (Bessi et al. [2016](#); Quattrociocchi et al. [2016](#)). This may occur without people even being aware of the process: for instance, US college students are largely unaware of how gatekeepers of news sources that use personalisation algorithms (Google and Facebook) track user data and apply editorial judgements to deliver personalised results (Powers [2017](#)).

El-Sharawy ([2017](#)) explains from his company’s study of Facebook engagement in the 2016 US presidential election that Trump’s campaign team encouraged the two opposing filter bubbles that developed on Facebook: prominence of very right-wing versus mainstream media in users’ newsfeeds. This is backed up by our own analysis of Breitbart’s Facebook Timeline Photos which shows that they repeatedly slurred mainstream media as “rigged” in favour of Clinton (six images): for instance, “Establishment media are Hillary Clinton campaign workers”, accompanied by “#rigged” (Breitbart [2016b](#)). Breitbart also repeatedly

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affective content designed to provoke voter outrage. This is directly evident in the themes about voters (see Table 1). One theme is that Clinton thinks that Trump voters are “deplorable” (five images)—a rehash of Clinton’s September 2016 use of the phrase “basket of deplorables” to describe half of Trump’s supporters. For instance, one image portrays an old man in a US Marines T-shirt, holding a Trump/Pence poster, the image captioned, “Hillary thinks you’re deplorable. The media thinks you’re stupid” (Breitbart [2016a](#)). Another five images affectively urge Trump voters to vote. For instance, incorporating Clinton’s “deplorables” insult, one poster depicts Trump speaking at a podium, captioned, “Let’s roll, deplorables” (Breitbart [2016e](#)).

Looking at the most common themes within the 75 Breitbart Facebook images, rather than focusing on policies, the most frequent themes focus on the candidates’ personality, with 16 captioned images attacking Clinton’s personality as crooked and corrupt; and another six images portraying Trump as a winner (see Table 1). Where policies are presented, these are as simplistic end goals and claims. For instance, Trump’s anti-corruption policy is presented by an image of Trump speaking at the podium, captioned, “It’s time to drain the swamp” (Breitbart [2016d](#)).

If fake news circulates, uncorrected, in closed communities; if people are indoctrinated to disbelieve truthful facts by damaging the reputation of mainstream news; and if that fake news is deliberately affective and inflammatory, we are moved ever further from Habermas’ archetypal democratic ideal of a public sphere that ultimately seeks consensus through enabling all to speak rationally, through listening to others’ viewpoints and agreeing the best way forward (Habermas [1984](#)). Even if one rejects such idealism, adopting a position closer to

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them: lack of engagement was problematic because the less that people engage with content, the less likely their newsfeed would surface it. What Facebook did not want, however, was to become “arbiters of truth ourselves”, because it believes in “giving people a voice, which means erring on the side of letting people share what they want whenever possible” (Zuckerberg [2016b](#)). Instead, Facebook preferred to “find ways for our community to tell us what content is most meaningful” (Zuckerberg [2016a](#)). However, within 11 days of the US presidential election, Facebook’s position changed from declaring that Facebook’s impact was minimal, to specifying how it planned to combat fake news. Unusually, it revealed features under construction comprising: elevating the quality of “related articles” in the news feed; third-party verification by fact-checking organisations; stronger technical detection of misinformation; easier user reporting of fake news; warning labels on stories flagged as false; “listening” to advice from the news industry; and “disrupting fake news economics” (Zuckerberg [2016b](#)).⁴ We evaluate these solutions below.

Elevate Quality of “Related Articles” in News Feed

In response to a question at SXSW about whether Facebook should reshuffle its algorithm to reduce filter bubbles, El-Sharawy ([2017](#)) states: “Facebook should take total responsibility—it is their problem—but I don’t know what they should do.” Prior to the fake news furore, earlier in 2016 Facebook was criticised by conservatives for using human editors to suppress conservative news stories in its Trending Topics. Initiating wider debates about Facebook’s role in news distribution, journalists condemned Facebook for its absence of public mission in its commercial focus on giving users only what they found pleasing (Carlson [2017](#)). Facebook’s difficulty is that it needs to acknowledge that it is more than just a neutral pipes platform, but as explained by El-Sharawy (2017), “Facebook’s algorithm is not neutral since mid-December 2016, it has been actively promoting certain types of news stories and suppressing others, including false news stories and conspiracy theories” (El-Sharawy [2017](#)). Google overtook Facebook as the most visited website in the world (El-Sharawy et al. [2017](#)).

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problem: the economics underpinning the spread of fake news and the propagandistic intentions of professional persuaders.

Even if users are seen as integral to solving the fake news problem, there are three psychological perception issues with the solution of flagging. Firstly, if people hear something a lot, they perceive it as true, even for facts that contradict prior knowledge (Fazio et al. [2015](#)). Thus, as Lisa Fazio (Vanderbilt University) explains:

a second reading of something (for instance, a falsity) makes us more likely to think it is true. This makes it difficult when trying to dispute these false stories, as you don't want to repeat the false story to make it appear as true in people's heads. (Bridges et al. [2017](#))

Secondly, people often forget the source of presented facts, including that they came from an unreliable source (Henkel and Mattson [2011](#)). Fazio explains the consequences of this for flagging: "if a headline is marked false, we may remember the headline but not the false tag" (Bridges et al. [2017](#)). A third problem is that prior beliefs influence how people remember corrected facts. This was demonstrated in the 2003 Iraq War, in studies on whether people remembered the wrong information or the correct information in inaccurate news that was subsequently corrected (Lewandowsky et al. [2005](#)). Thus, flagging stories as false may not improve people's stock of correct knowledge (Bridges et al. [2017](#)).

Listen to Advice from the News Industry

A further strategy proposed by Facebook is to listen to advice from the news industry, from which fo

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A third innovation is to give people more direct interactions with their political representatives, to recalibrate what information they trust. For instance, the US app Countable breaks down news and legislative bills into simple English, and enables people to immediately communicate their position on any bill or issue with their lawmaker. Andrea Seabrook (Managing Editor, Countable) explains:

If we can get people to often and easily engage, then at the end of the political cycle, we will have decoupled people from the narrative that politicians will tell them what is the truth about the election. People will be able to see for themselves, by the time they next vote in 2018. (Seabrook and MacLaggan [2017](#))

However, such solutions, while potentially impactful in rebuilding engagement between politicians and voters, are nascent experiments. While they may encourage reporting on only what is actionable, there is no guarantee that this new format will be successful among users brought up on a fake news diet.

A fourth journalistic innovation is collaborative journalism to reduce the costs of fact-checking. Responding to concerns about upcoming French elections in April and May 2017, First Draft created collaborative journalism project Cross Check, where French newsrooms check each other's accuracy. Running from February to May 2017, it allowed at least 17 French regional and international media companies to power a website where the public could report suspicious content, or ask questions for Cross Check's media partners to respond to. Various data and tools were contributed by different media partners, including Facebook which supports the vetting platform through dedicated tools and media literacy efforts to explain the

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Media Economics and Digital Advertising: A Solution Lies Within the Problem

Rather than simply relying on social networking sites to find the “right” algorithm while negotiating censorship accusations; on Facebook users to exercise rational judgement in recognising, flagging and sharing fake news; and on resource-poor journalists to experiment with breaking people out of their filter bubbles while committing to fact-checking; we suggest that the role of digital advertisers in proliferating fake news also needs scrutiny. After all, many of the fake news websites of the 2016 US presidential election were ultimately created not for propaganda, but for money.

Digital Advertising Enables Fake News Sites to Profit

There is a longstanding relationship between the press and its need for advertising revenue. Underpinning this is the fiscal value of audience attention, as the rates that publishers charge advertisers depend upon the size and nature of the audience they can deliver. Unfortunately, as explained earlier, the societal shift towards digital media, and its economic model, has not favoured legacy news organisations. Conversely, the new economic underpinnings enable fake news sites to flourish.

It is the way digital advertising is paid for and served that favours fake news sites. Whereas in print news, advertisers and agencies working on their behalf carefully choose their news outlet, advert format and whether an adjacent story might damage a brand, such

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Ad networks (such as Doubleclick) are thus able to offer advertisers a massive range of websites to exhibit their advertisements, allowing them to reach potentially large, but also profiled, audiences. For sense of scale, Google's Doubleclick ad network spans over two million websites that reach over 90 per cent of people on the internet. Small and large publishers alike benefit because ad networks give publishers a way to profit from their advertising spaces without having to go to the effort of selling individual slots to advertisers.

On top of this, programmatic techniques (called "programmatic" by the advertising industry) allow additional data to be used to further target the advertising. Programmatic allows advertisers to target consumers automatically based on certain metrics obtained through algorithms. It differs from behavioural advertising in that it draws on a wider variety of sources than data from ad networks to target audiences (such as first-party data from the brand advertising or third-party data about potential audiences). It also provides opportunity to use automated means to create (as well as target) advertising: information about the audience can be used to personalise the design of advertising for identified audiences.

Critical to our concern with fake news is that although advertising served by ad networks maximises an advertisement's reach to whomsoever and wherever a desirable person might be, advertisers relinquish control over where their advertising is displayed. Such automation of the ad space buying process has resulted in advertisers having less understanding of the websites and pages they are appearing on. Indeed, adverts for brands such as Honda, Thomson Reuters, Halifax, Argos, John Lewis, Disney, and the Victoria and Albert Museum have appeared on content promoting Islamic State (ISIS) and neo-Nazi content. This is because the behavioural and programmatic advertising profiles the person rather than the website. Adverts will appear to

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ad networks need to be involved to prevent fake news sites that have been ejected from one ad network from simply moving to another, as currently happens (Bounegru et al. [2017](#); Silverman et al. [2017](#)).

As such, to tackle the fake news problem at its economic heart, we recommend that governments consult with self-regulatory bodies that represent ad networks, advertising agencies and advertisers (e.g. Internet Advertising Bureau and International Advertising Association). The possibility here is twofold in that: (1) governments can pressurise advertising associations that largely enjoy self-regulatory status; and (2) advertising associations are well placed to educate their members, especially advertisers. Given that the advertising chain requires publishers, ad networks and advertisers to function, if advertisers place financial pressure on the system, there is scope to reduce the income of both fake news publishers and the ad networks that host them. For instance, on clicking on fake news website “abcnews.com.co” with the Ghostery add-on, it reveals two active ad networks: Viglink⁵ and ShareThis.⁶ Both consider themselves to be respectable companies: Viglink has venture capital backing from Google and ShareThis has funding from leading venture capital firms (such as Draper Fisher Jurvetson), and is already connected to the Digital Advertising Alliance which is an association that claims to promote responsible privacy practices. In general, these ad networks are not outliers, but seek to lead, and be part of, the mainstream advertising community. Pressure can be applied on these to be more discriminating.

There is merit in the point of Silverman et al. ([2017](#)) that if fake news sites are rejected by mainstream ad networks, they will eventually gravitate to less discriminating ones. However, we posit that with greater transparency in the system for advertisers, non-fake news

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The Near-horizon: Automated Fake News and Manipulation of Fellow-feeling

Given the rapid onset, scale and nature of the contemporary fake news problem, it is important to consider near-future possibilities. In the context of fake news, this includes the ability to manipulate public sentiment via automated fake news. This distinct possibility arises because the success of fake news comes from its creators having financial self-interest in “feeling-into” online conversations and creating headlines to resonate with specific groups (such as pro-Trump supporters). There is a clear and relatively simple opportunity to marry technology that detects online emotion via the language and words that individual and groups post, with automated news, namely news headlines and body copy written by computers.

Understanding and Knowing How to Manipulate Public Moods

Fake news creators are already “feeling-into”, and profiting from, collectives from afar. For instance, Macedonian fake news providers exploit the beliefs, desires and concerns of specific US audiences. They can do this because online social media communities (such as on Facebook) already encourage echo chambers to form, be this via filter bubbles, confirmation bias or both. Earlier, we noted the rise of “empathic media” (McStay [2016b](#))—namely technologies that gauge emotions, intentions and life contexts to maximise appropriateness of feedback and content. Of most relevance to our concerns with fake news is analysis of emotions in words and images. Such sentiment analysis is widely used to search and cross-reference social media data and news articles for insights into social feeling towards a given issue that

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The Potential for Empathically Optimised Automated Fake News

Contemporary fake news already operates in the context of “feeling-into” online collectives, filter bubbles, confirmation bias and echo chambers. The opportunity for computer-generated fake news, weaponised and optimised to resonate with social media users, seems entirely feasible given the current state of sentiment analysis and automated journalism, as well as the affective tenor of the Trump presidential campaign. The process would be to: understand key trigger words and images among target groups; create fake news and measure its engagement (via click-throughs, shares, likes and effectiveness of message elements); and then have machines learn in an evolutionary capacity from this experience to create stories with more potency to increase engagement and thereafter advertising revenue. The feedback process also has implications for use of aggressive propaganda and information wars (at the time of writing, US journalism and US senate intelligence inquiries were concerned about Russia’s attempts to influence elections abroad, including the United States and Europe). We suggest that the commercial and political phenomenon of empathically optimised automated fake news is on the near-horizon.

Conclusion

Fake news is not a new phenomenon, but the 2016 US presidential election showed us a new iteration, driven by profit and exploited by professional persuaders. While a laudable variety of solutions to the deeply socially and democratically problematic contemporary fake news phenomenon are being implemented, the current state of affairs is far from ideal. The widespread implementation of our recommendations to address this phenomenon will require regulators to take immediate action against the advertising industry. A silver-bullet solution, however, is unlikely to emerge because the current content that cannot be regulated against is a large driver of the empathically optimised fake news. We



DISCLOSURE STATEMENT

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Notes

1. While the calling of a UK General Election for June 2017 meant that the Fake News Inquiry closed before synthesising and making recommendations on its 78 written submissions, we have evaluated these elsewhere (Bakir and McStay [2017](#)), reaching the same conclusion as in this paper.

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3. See <https://factitious.augamestudio.com/#/>.

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