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Adblocking and Media Automation: Anti-Advertising and Industry Disruption

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Apple's 2015 decision to allow ad-blocking apps on the iOS App Store sparked a larger debate — 'a kind of war', in the words of one developer. At issue were the ethics and practices of both advertisers and ad-blockers. For some participants, the stakes were, and remain, high: the future prospects of the advertising-supported web, and therefore our established systems for producing, paying for, and circulating journalism. Soon after ad-blockers became easily available on the iPhone, startling reports began appearing about their popularity and widespread use, with apparently serious impacts on publishers' revenues. The data relating to the uptake and use of these tools is often partial, contradictory, and best cited with caution. Reuters' *Digital News Report 2015* stated that 47 per cent of its US sample and 39 per cent of its UK sample were regularly using ad-blockers, increasing to 56 per cent and 55 per cent respectively for 18- to 24-year-olds. A widely cited (and widely questioned) report from Adobe and PageFair estimated that ad-blockers cost publishers $US22 billion worldwide in 2015. The UK Internet Advertising Bureau now claims that the growth of ad-blocking has stopped, with a user base fairly stable at 21 per cent.[1]

This chapter is not a detailed account of the rise of ad-blocking, or the ethical and business controversies surrounding it. Instead, I use the debate to highlight some recent changes in the media industries that, despite their ramifications for journalism and the public role of the media, may not be obvious to media readers, listeners and viewers, because they are not readily visible in the evolving websites and apps we visit everyday. The problem of ad-blocking reveals a good deal about the kinds of changes that are currently underway, and the complex new political economy of mobile media.

Much of our discussion of the recent history of journalism has focused on the far-reaching consequences of disruption in just one advertising sector — the demise of what we once called 'classified' advertising, in areas such as real estate, jobs and cars. Digital media, as we know, has enabled new players to enter these markets, and facilitated their separation from traditional journalism-driven businesses. More competition has meant lower margins online, jeopardising the cross-subsidies assumed in the classic print journalism business model, which has then had to be stripped back to fit the revenues of web-based advertising. But this simple and familiar account presents far too static a picture, because media markets have continued to change. More fragmentation has driven an increase in the supply of advertising, reducing prices, and therefore returns. At the same time, social media, built around free user-generated content, has become an accelerating gravitational force for traditional journalism, drawing in readers, advertisers, and professional content with increasing speed. After much painful restructuring, ongoing 'viability' appears to be a more distant goal than it was a decade ago.

In this grim light, ad-blocking now appears as a further disruption, another 'existential' challenge to online publishers. Of course, filters and blockers of various kinds are not new and have been a feature of the desktop web for many years. The open structure of the web, and the extendable design of web browsers, has

long enabled users to exercise some control over what they see and download — browser add-ons able to block specific domains identified with certain content are technically reasonably simple. But two features of the media landscape that have recently emerged are vital in understanding the conditions of possibility for this current disruption.

Conditions of possibility (1): Mobility

First, mobile media: the emergence in the last five years of the mobile, broadband internet, and the extraordinarily rapid social distribution of the devices we continue to call smartphones (although the Android and Apple devices that most of us use are designed with media creation and consumption more in mind than phone communications). We now understand to some degree the extent to which the mobile internet is not a simple repackaging of the desktop web in a smaller format. It is better seen as a distinct media economy, with many distinctive possibilities and constraints, embodying a long history of technological, business, and design choices. To identify just a few of the key differences between the mobile internet and its desktop equivalent, all of them bearing particularly on ad-blocking: mobile is attuned to location in a way that the desktop internet is not; mobile is often more expensive to access than fixed, because of the price of cellular services; mobile users navigate with fingers and voice, not mice; mobile is generally slower than fixed broadband; mobile devices have less powerful processors, and less storage than desktops or laptops; they rely on batteries, so power consumption is always a critical design factor; and security and privacy may be particularly important to mobile users, because devices are used (and often mislaid) in public places.

In general, almost every aspect of mobile media, from intellectual property in content, to file systems, software acquisition, and technical standards, is managed more tightly than on the desktop, and especially so in the case of Apple's iOS platform. Apple's

refusal, back in 2010, to allow Adobe's Flash video playing software on its mobile devices, was a clear and early signal of what was going on, especially in the light of Flash's then importance for display advertising. Steve Jobs' April 2010 'Thoughts on Flash' was a public explanation of why software that was installed on almost every desktop and laptop Apple computer would not be tolerated on mobiles. It remains a remarkable statement, a brisk resume of questions that remain heavily loaded, although the specific technical and industry politics have since moved on. Was Apple precluding users from access to 'the full web'? Was it compromising the 'open' qualities of the internet? Jobs' justification for banning Flash were about the vital importance of security, usability, mobile performance, and the imperative to avoid allowing a third party to take de facto control over critical aspects of the platform.[2]

All this means that media consumers and producers, as well as the technology companies, must take a very different approach to mobile content. Those media websites that have been built around maximising revenue on the desktop — replete with auto-playing video, large banner ads, smaller ads, embedded social media, recommendation widgets, and extraneous corporate content — are the result of many connected business processes. But their design has involved a whole series of assumptions about users, services and infrastructure. The result is that some elements of the digital content system — especially the advertising formats and content — have proved unsuitable for mobile, and difficult to adapt. Desktop-driven media often takes too long to view, does not adapt well to smaller screen sizes, and makes too many demands on bandwidth, processing power, and battery life. This should not be a cause for glib criticism: rather, it simply reflects the rapid pace of change in the industry, the pathways that the technology has taken from fixed devices to mobile, and the fact that, from the longer historical perspective, online media, including advertising, is still in its infancy and is still heavily influenced by earlier industry conventions.

Conditions of possibility (2): Automation

The second key recent development is the automation of online advertising. We are now debating the value of human news editors for platforms such as Facebook, and the larger consequences of algorithm-driven news, video and other content. But automation came to advertising earlier nd has not been the subject of detailed research. Although advertising makes most commercial media possible, we know surprisingly little about the 'ad tech' field, because research in digital media studies has long been oriented more towards the content we value than the underlying systems that support it. The result is that we know less than we should about a remarkable transformation, which is likely to be just as important as the switch to mobile. The underlying driver of change in the case of advertising has been the same fragmentation of audiences and markets that has reconfigured the industry more broadly. A bespoke, time-consuming business — the purchase and placement of ads across different media — evolved in an environment with a limited number of outlets across a small number of print and electronic media, clear geographic segmentations, and audiences that were aggregated into broad demographic groups.

As it turns out, the proliferation of online media and audiences has stimulated the development of an entirely different, controversial, but highly successful approach, notwithstanding ongoing criticisms and reservations. Often referred to generically as 'programmatic' advertising or marketing, automated methods of buying and placing ads across websites, apps and social media are now offered across a whole range of platforms. People no longer buy or place ads: these tasks are performed by machines. People continue to plan and produce marketing and advertising campaigns. To oversimplify, the promise of the new services is threefold: first, the *placement* of ads is based on individual user histories and is therefore personalised and controlled to a new degree, so that (in theory) ads reach users who are directly and

currently interested in the advertised service or product; second, the *cost* of the advertising is a direct reflection of current supply and demand; and third, the *effects* of the advertising are clearly visible and measurable. The purchase of the advertising can be managed through real-time auctioning, of the kind made famous by Google's AdWords program, launched in 2000. But this technique does not define the new systems. Ads may also be purchased 'directly', guaranteeing space in specific locations. Advertisers may pay for any number of clicks, impressions or conversions, and need not make a minimum payment.

The success of programmatic advertising online has seen its expansion beyond the internet, into media such as broadcast television that have traditionally worked very differently. The other respect in which these systems are extending their reach is in relation to their information about users' preferences, media activities, and consumer histories. Here we are seeing an increasing integration of data derived from online tracking with individual information from the physical, 'bricks and mortar' retail environment (where in-store wi-fi, electronic payments and Bluetooth beacons may all be valuable sources), and offline media consumption such as TV viewing. The objective here is a more comprehensive and accurate picture of individual consumption, reflecting and attempting to capture the hybrid quality of contemporary shopping practices, where people move between online and offline media, and online and in-store research and purchasing.

Problems and criticisms of programmatic advertising

The forces influencing Apple's decision to allow ad-blocking, and the actions of ad-blocking developers, entrepreneurs and users, are now somewhat clearer. Thinking back to Apple's 2010 response to the prospect of Flash in mobile media, some of the larger questions then posed by Steve Jobs reappear in this new context: problems relating to users' privacy and security, the issues we have noted for the performance of websites on mobile

devices, and of course also the question of strategic control over the platform. Further questions about programmatic advertising have been extensively debated within the advertising industry. In particular, the matter of 'quality' is contentious — where ads are appearing and whether anyone is actually seeing them. If these systems are so time sensitive and responsive, why do users continue to see ads for products they have purchased? A related problem goes to the transparency of the system. With pricing changing (and sometimes unexpectedly increasing), what can advertisers do to understand movements in the market, apart from blindly trusting the platform, or accepting its opacity? From our perspective, the critical issues are those that arise for consumers of media. What degree of tracking is acceptable? At what point does programmatic marketing infringe on privacy? How much trust do consumers have in the digital advertising networks, if these are repositories of large amounts of personal information? How much annoyance, inconvenience or cost will users bear in order to access content they value?

Ad-blocking and its enemies

The widespread adoption of ad-blocking suggests hard limits to all these unknowns. The Interactive Advertising Bureau (IAB), an international industry group, acknowledged the depth of consumer frustration with online advertising in a series of responses to ad-blocking. Scott Cunningham, an IAB executive, blogged as follows in October 2015:

> Through our pursuit of further automation and maximization of margins during the industrial age of media technology, we built advertising technology to optimize publishers' yield of marketing budgets that had eroded after the last recession. Looking back now, our scraping of dimes may have cost us dollars in consumer loyalty. The fast, scalable systems of targeting users with ever-heftier advertisements have slowed down the public internet and drained more than a few batteries.[3]

The IAB has continued to campaign against ad-blocking. Its principal strategy now is to develop a new set of measurable and certifiable standards for ads, summarised in the 'LEAN' acronym: Light, Encrypted, Ad Choices (meaning transparent), and Non-invasive. While LEAN and other industry initiatives should improve user experiences, it's worth remembering that the ad-blockers are the latest in a long line of anti-advertising technologies enthusiastically taken up by media users: remote controls and VCRs all appealed to users with the promise of greater control, and the capacity to avoid annoying advertising. Like earlier user-oriented television technologies, different blockers focus on different features, and the motives for ad-blocking are manifold. Blockers and related tools promise a range of benefits and various forms of user control: control over browsing, security against 'malvertising' (ads that contain malware), protection against tracking ads, 'efficiency' (faster page loading), cheaper browsing (that helps users stay within data caps), and longer battery life. 'Ad-blockers' are clearly much more popular than 'browser controllers' or 'do not track' tools: all are aimed at giving users more control over advertising but concentrate on different elements of the larger problem. LEAN is an ambitious attempt to address in one initiative a whole array of the problems different ad-blockers target: its capacity to do that, and its degree of adoption within the industry, remain to be seen.

Meanwhile ad-blocking developers are moving into the very industry they have attacked, with the the emergence of their own two-sided business model. The idea here is that while consumers use the app to block ads they don't want, advertisers can pay the developer for inclusion on a 'white list', guaranteeing their ads will not be blocked. 'White listing' has been an extremely contentious feature of ad-blocking services for some time, but recent reports that Eyeo, the developer of Ad-Block Plus, is planning an automated advertising market for ads meeting its own 'Acceptable Ads' standards, have drawn particular criticism from

major industry players including Google and App Nexus. Eyeo currently charges a 30 per cent fee to advertisers for white listing. While it claims that most of its clients are small entities that are not charged, large companies who do appear on its 'Acceptable Ads List' include Google, Microsoft, and Amazon.

For their part, publishers have responded to ad-blocking in a range of ways. They have litigated and lobbied for regulation, without success to date. They have experimented with blocking readers using ad-blockers. attempted to prick the conscience of ad-blockers, and they have sought closer and more committed connections with readers and viewers. They have signed up to aggregators such as Google News and Apple News. Discounted 'subscription' and low cost 'membership' models are ubiquitous, as news and media providers search for price points with market traction. From the entertainment sectors, the cases of Spotify and Netflix appear to show that 'free' need not be the default for online content — but these are global services and, certainly in the case of Spotify, the return they offer content creators and original publishers is low.

We can envisage other possible secondary consequences of ad-blocking: a further shift from the open web, towards apps and towards platforms, especially Facebook, that may promise protection from ad-blocking in return for control over advertising revenue. One strategy is to return to a model of advertising that was widely used in an earlier new media era,1950s television. 'Native advertising', 'sponsored content', 'paid content' and related techniques embed paid-for material directly into the content. In some cases, the material may be controlled and generated by an advertiser; in others it will be created and produced in house. There is a spectrum here, from commissioned editorial material (a special series of reports on a specific public-interest topic, for example) to advertising (a series of reports shining a positive light on a corporation or product).

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The ad-blocking story is not yet resolved, but it is already a striking example of the dynamics and complex consequences of automation in one industry sector, and an eloquent case study of media disruption and innovation. Clearly, ad-blocking demonstrates the continuing level of disruption and technologically driven change in an industry that has been subject to such disruption for decades. It speaks more generally to many of our current dilemmas and difficulties in digital media and internet policy. It reminds us that an advertising-supported internet, whether we like it or not, should not be taken for granted, and work on alternatives would be very useful. It reminds us that the concentration and aggregation of digital media need not proceed along the predictable lines. It highlights the ambiguities at play in our familiar narratives of technological battles between small scale, disruptive entrepreneurs and the industries they target.

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Endnotes

1 'Adblocker Eyeo's plan to sell ads riles Google', *Financial Times*, 14 September 2016.

2 Retrieved from http://www.apple.com/hotnews/thoughts-on-flash/

3 S Cunningham, 'Getting LEAN with Digital Ad UX', retrieved from https://www.iab.com/news/lean/