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Five Processes in the Platformisation of Cultural Production: Amazon and its Publishing Ecosystem

Mark Davis

IN A RECENT ESSAY THE LITERARY SCHOLAR MARK MCGURL ASKED, Should Amazon.com now be considered the driving force of American literary history? Is it occasioning a convergence of the state of the art of fiction writing with the state of the art of capitalism? If so, what does this say about the form and function of narrative fiction—about its role in symbolically managing, resisting, or perhaps simply ‘escaping’ the dominant sociopolitical and economic realities of our time? (447)

McGurl’s essay, with its focus on the sheer scope of Amazon’s operations and their impact on literary institutions, from their online bookstore, to their ebooks division, to their Audible audiobooks division, to their Goodreads reader reviews community, provides a salutary insight into current conditions of cultural production. The fate of literary culture, as McGurl says, now rests in the hands of digital technology, with its close connections to the neoliberal commodification of work, leisure and culture. But McGurl’s essay if anything underestimates the extent to which the fate of western cultural production is increasingly tied to digital media corporations. Focused on Amazon’s impact on the literary field, it opens up possibilities for understanding the *processes* of platformisation that underpin the cultural activities of companies such as Amazon.

In this article I argue that of the five 'GAFAM' corporations (Google, Amazon, Facebook, Apple and Microsoft) that dominate platform capitalism in the west, Amazon and its various platforms are an exemplar of what has been called the 'platformization of cultural production' (Nieborg and Poell), that is, the reorganisation of cultural industries around digital platform logics. This process of platformisation, as David Nieborg and Thomas Poell have said, 'can be defined as the penetration of *economic, governmental, and infrastructural extensions* of digital platforms into the web and app ecosystems, fundamentally affecting the operations of the cultural industries' (4276 original italics). Through such processes culture is rendered as data and subjected to the same logics of surveillance and the extraction of value that define platform capitalism more generally, enacted through user participation, big data, algorithms, and predictive AI.

In what follows I use Amazon as a case study to demonstrate how cultural and aesthetic practices are reordered under the platformisation of culture. This reordering, I argue, involves five concurrent processes: resorting, transmutation, enclosure, surveillance, and capture. These processes, I argue, don't somehow 'replace' the human, but intersect with human factors in a hybrid post-digital environment where digital and human practices intermingle. Such processes in the case of Amazon have not only transformed the literary field as McGurl argues but have enabled the company to create its own alternative, proprietary publishing field. The article first discusses Amazon in the context of recent scholarship on platform capitalism and the platformisation of culture. It then discusses processes of cultural reordering in light of examples of different aspects of Amazon's operations, placing an emphasis on Amazon's book-related ventures, given the cultural centrality of books as a media form and their foundational role in the company's formation. At the heart of these processes, I argue, is a relentless logic of quantification and commodification closely tied to the neoliberal logics of platform capitalism, that tends to reduce all social transactions to market transactions but that is at the same time resisted by human practices that are a necessary if often occluded part of life in a post-digital world.

While these processes can be found in the business models of non-western platforms such as those owned by China's 'BAT' (Baidu, Alibaba and Tencent) companies, the article concentrates almost entirely on western platforms because of its focus on Amazon, and seeks to avoid universalising its insights given that Chinese companies, for example, share many aspects of their models with western companies but differ in important respects (Davis and Xiao forthcoming).

The Post-digital Platform Logics of Amazon

Amazon has been chosen as the subject of this case study because of the companies that make up 'GAFAM' it has a longstanding connection to traditional media and cultural forms through its origins as an online bookseller. Incorporated in 1994, launched in 1995 as an online bookstore, and listed on the NASDAQ in 1997, the company has consolidated a position as the world's largest bookseller, the dominant ebook and audiobook provider, the leading aggregator of reader reviews via its Goodreads operation, and as a publisher in its own right. But books are now a relatively minor component of the company's vast operations. The company's online store has expanded far beyond books and has over 300 million customers and 40 per cent of the US ecommerce industry (Benn). Amazon has its own music and video streaming platforms, is a manufacturer of home assistance devices, tablet devices such as Kindle Fire, appliances such as its Ring video doorbells, and thousands of Amazon private brand products available via its online and physical stores. It offers data-as-service products such as machine learning, robotics, quantum computing, analytics, blockchain and AR and VR services, and is a leading provider of cloud server infrastructure via Amazon Web Services (AWS), now one of the most profitable parts of the company (Lynley). As such, among the GAFAM corporations Amazon is the company that most explicitly conjoins an older, print-based information order and a new information order based in the reconfiguration of capitalism around digital media. The company's history literally spans a transition from a knowledge economy based in 'print capitalism' (Anderson) and its elite cultures to a data-based knowledge economy based in 'platform capitalism' and the logics of the distributed network, and thus makes an apt case study in how culture becomes data.

As a company comprised of multiple platforms, virtual and physical, Amazon makes an interesting test case for theories of platform capitalism. As Tarleton Gillespie argues, the word 'platform' seeks to cover the ways in which tech companies attempt to reconcile multiple conflicting imperatives such as the needs of 'end users, advertisers and professional content producers':

Intermediaries like YouTube must present themselves strategically to each of these audiences, carve out a role and a set of expectations that is acceptable to each and also serves their own financial interests, while resolving or at least eliding the contradictions between them. ('The Politics of "Platforms"' 353)

Yet Amazon, while often an intermediary, is just as often a goods and services provider in its own right. It mixes online and offline retail, logistics, supply chain management, and networked digital systems. The primary business of platforms, according to Nick Srnicek, is to extract and monetise data: '[I]n the twenty-first

century advanced capitalism came to be centred upon extracting and using a particular kind of raw material: data' (39). As he says,

Rather than have to build a marketplace from the ground up, a platform provides the basic infrastructure to mediate between different groups. This is the key to its advantage over different business models when it comes to data since the platform positions itself (1) between users, and (2) the ground upon which their activities occur, which thus gives it privileged access to record them (44).

Amazon by this measure is not a platform but a digital service corporation that owns multiple businesses which to a greater or lesser degree work according to Srnicek's model. Its online bookstore, for example, differs from platforms such as Facebook since it profits from retail sales of physical objects and thus positions its users as customers, even as it is fundamentally digital in every aspect of its operations from inventory control, to service delivery, to the ways in which it surveils and aggregates data from its customers and would-be customers, to extract maximum value from them.

Amazon is in this respect better understood as a 'post-digital' company that combines physical infrastructure, supply chains and industrial capacity with networked digital models. In theoretical terms, as Florian Cramer has explained,

the term 'post-digital' in its simplest sense describes the messy state of media, arts and design *after* their digitisation (or at least the digitisation of crucial aspects of the channels through which they are communicated). Sentiments of disenchantment and scepticism may also be part of the equation, though this need not necessarily be the case—sometimes, 'post-digital' can in fact mean the exact opposite. (17)

In practical terms, the ideological mythscapes of platform capitalism always necessarily involve often occluded environmental and human input. This includes the exploitation of natural resources such as are used to make and power digital products (Crawford and Joler) and the hidden inputs of people such as the laborers of southern China who assemble electronic goods (Chan et al.), the programmers who give AI its inbuilt often racialised and gendered biases, or the workers who do micro-tasks for Amazon's digital labour platform Amazon Turk, a platform that has the function, as Lilly Irani has argued, of disguising the reliance of tech companies on micro-labour so that tech companies can 'maintain preferred identities' and 'continue to see themselves as much-celebrated programmers, entrepreneurs, and innovators... so they can attract capital as high-tech companies' (226-30).

Amazon, Books and the Platformisation of Cultural Production

Many of Amazon's businesses have a cultural dimension that involves the creation, curation and delivery of human-made cultural content, such as the bookselling and publishing operations mentioned above or their video streaming operations. Here it is useful to consider how culture, including popular and high culture, increasingly, is mediated by platform logics. As Nieborg and Poell argue, platforms are able to reconfigure the terms of cultural production because they aren't simply intermediaries. Instead, they work to facilitate a multi-sided business model that in addition to buyers and sellers includes actors such as regulators, partners and advertisers. Further, cultural platforms are able to downgrade to activities of one group of these actors to benefit others, for example, to privilege buyers and advertisers over sellers. One effect of this platformisation of culture is that in a multi-sided market dominated by the needs of users and advertisers 'content developers can become dispensable... Content developers are just another side, and *individual* games, magazines, and newspapers are increasingly interchangeable cultural commodities' (4282 original italics), as evidenced by 'Facebook's indifference to the plight of news publishers' (4283). Further to this, content developers are subject to extreme levels of competition and the logics of ubiquitous production. For example, Nieborg and Poell demonstrate how, subject to platform logic, the news industry and game developers 'have to adjust their business models to an ecosystem flushed with content' (4284). The same is true of cultural producers. Every book, movie or song is published into a world of over-abundant content in which platform providers have the upper hand. In effect, the logics of cultural practice are being reordered so that the production of cultural goods facilitates the business models of digital platforms.

Nieborg and Poell's approach shows how the platformisation of culture works as a *system* congruent with the logics of digital capitalism. Here I build on their work but place an emphasis on *practice* to describe five concurrent processes (which is not to exclude the possibility of others) that underpin the platformisation of cultural production, with an emphasis on Amazon's publishing-oriented activities given the company's debt to the pre-digital form of the book and its role in curating its post-digital lives.

1. Resorting

First, this reordering of cultural practice involves a *resorting* of cultural goods. Platforms have become cultural mediators and tastemakers, overwhelming the senses in which mediation was arbitrated by a class of intermediaries (as Pierre Bourdieu described them) who established themselves as cultural middlemen (Bourdieu). As José van Dijck has argued, using an expression from actor-network

theory, 'a platform is a *mediator* rather than an intermediary; it shapes the performance of social acts instead of merely facilitating them' (29). Visible here is the diminution of 'expert culture' that has traditionally dominated cultural production. As Gillespie has argued, a new 'knowledge logic' has emerged that 'depends on the proceduralized choices of a machine, designed by human operators to automate some proxy of human judgment or unearth patterns across collected social traces', and which counterposes itself against and perhaps supplants 'editorial logic' and the 'choices of experts'. ('The Relevance of Algorithms' 192). Similarly, Neta Alexander (Alexander) has described 'the mathematization of taste'.

As Blake Hallinan and Ted Striphas have argued, the algorithmic activities of platforms such as Netflix can begin to impact on the definition of culture itself, transforming the definitions of and relationships between aesthetics, ways of life, and intellectual and artistic activity. They argue that 'algorithmic culture', which they provisionally define as 'the use of computational processes to sort, classify, and hierarchize people, places, objects, and ideas, and also the habits of thought, conduct, and expression that arise in relationship to those processes' (119), is increasingly intertwined with the logics of culture *per se*. Attempts to improve Netflix's recommendation engine, as they show, resulted in a shift away from debates about cultural value to

something like the opposite: how to moderate elements of the cultural field that may present themselves as atypical or outstanding, so that they can be led to make sense relative to other, more even-keeled, examples... it appears as though questions of cultural authority are being displaced significantly into the realm of technique and engineering. (122)

In this way platform logics tend to disintermediate traditional 'gatekeepers' on the basis that this leads to a better form of egalitarianism, directly in tune with the needs of consumers (Davis). Cultural platforms thus enact what Striphas, following Henri Lefebvre's description of a then emerging 'society of controlled consumption', has described as ever greater efforts by companies to tightly orchestrate 'commodity production, distribution, exchange and consumption' (*The Late Age of Print* 180-1). In book publishing, as Striphas says, this has involved the use of ISBNs, bar codes, tighter copyright provisions and more recently the use of cybernetic systems.

This resorting of culture at the same time involves a commensurate resorting of labour away from established work patterns and rights protections. Platform logic requires flexibility from and imposes new forms of precarity on its workers, and frequently involves hyper-Taylorism where every task is broken down into micro-

tasks and surveilled to ensure mandated levels of efficiency are maintained, whether they be Korean digital video freelancers (Kim), workers producing iPads (Chan et al.) or creative workers caught up in policies and rules imposed by online platforms and forced to adjust their practices accordingly, pushed by the demands of spec work and reverse auctions for their labour (Kennedy).

In the case of Amazon, their multi-sided business model is prioritised to privilege the needs of customers above all else, most notably creators and suppliers, who are downgraded by Amazon's famously hard-nosed business practices (Stone). For Amazon's online bookstore this obsessively customer-centric approach resorts knowledge by privileging customer reviews and recommendations, including algorithmically generated recommendations based on previous customer behaviour, over input from literary experts who early in Amazon's history provided its online reviews (Murray 58-9). This logic of resorting is mirrored in Amazon's physical bookstores, where books are organised not according to the usual bookstore categories but as Amazon explains 'are selected based on Amazon.com customer ratings, pre-orders, sales, popularity on Goodreads, and our curators' assessments' (Denham).

Amazon's resorting in general shifts power away from traditional editorial judgment. An example of this is Amazon Charts, a ranking system launched in 2017 as a rejoinder to editorially filtered lists such as the *New York Times* bestseller list. Charts includes a 'most sold' and a 'most read' list derived from data such as ebook page turns. The most sold list regularly includes self-published titles, which is a marked departure from lists such as the *New York Times* list and which underlines considerable differences in the priorities that underpin the lists.

Creators, too, are sorted. Suppliers such as publishers and authors are for Amazon a fungible commodity. Amazon can sort them as it wishes because it owns the dominant publishing marketplace. For example, clicking Amazon's 'buy' button activates an algorithm that decides the 'buy box winner', which might be content originator or a third party who is offering a better price on the same product, has better customer feedback, or uses Amazon Prime (Grady). Creators are sorted by the algorithms that rank and promote books, those that set prices, and those that manage inventory. The company can change terms and conditions for self-published authors, such as payments systems, to encourage creators into self-sorting that privileges certain pricing, length, and frequency of publication. Publishers are sorted by their willingness to pay promotional co-op fees or comply with offered retail terms, among other approaches that have been described as 'predatory' (Marcus). Such measures are estimated to push Amazon's share of revenue per book sold to over fifty per cent and as high as sixty per cent in the case of small publishers with less bargaining power (Packer). Should they refuse to accede, publishers risk having their 'buy' buttons removed (Packer; Marcus;

Stone). Together these strategies are designed to drive down the price of books (Grady), potentially at cost to authors and publishers who may be driven out of the market altogether.

These same logics of digital Darwinism also resort labour away from traditional work patterns and expectations. Amazon's famously ruthless warehouse staff employment practices include the creation of pools of low wage spec workers who are hired and dismissed according to their ability to work according to highly Taylorised, closely monitored and frequently draconian performance targets, in warehouse environments that have been described as 'without 'decency, respect and dignity' and 'what I imagine a low-security prison would feel like' (Bloodworth). Where labour laws allow, many are on contracts that tie them to the company with no guarantee of work. Amazon's white-collar workers report a similarly Darwinist environment in which some thrive but many struggle with daunting workloads, expectations of 24/7 availability, annual staff culls and monitoring systems that pit employees against each other. As one company motto puts it, when you 'hit the wall' instead 'climb the wall' (Kantor and Streitfeld). Those who don't meet a firing quota are weeded out by a ruthless 'stack ranking' process (Stone).

2. *Transmutation*

The second aspect of the reordering of culture is *transmutation*. Processes of algorithmic resorting, in conjunction with the business models of platforms, can prompt aesthetic transmutation and the privileging of new forms or previously sidelined forms because as Nieborg and Poell argue, 'producers... are impelled to develop publishing strategies that are aligned with the business models of platforms' (4281). For example, hip-hop songs, the most popular form of music, have become significantly shorter because streaming services pay per stream. Content producers are thus better off producing high volumes of short songs rather than low volumes of longer songs (Morris). Algorithms, according to Hallinan and Striphas, play an increasing role in deciding *what counts* as cultural activity. They cite *House of Cards* as a series that was attractive to Netflix precisely because it met the algorithmic criteria of their recommendation systems in terms of the audience it was likely to attract. Netflix's decision to release multiple episodes of series simultaneously and to adopt default autoplay mechanisms to facilitate binge-watching, a practice central to the company's business model (D'Souza), further encourages the production of series suitable for binge-watching.

For Amazon, such processes of transmutation have involved, in the case of books, a transmutation of the literary field and of the genres within it. The data-fication of book publishing, which can be tracked through developments such as the Dewey cataloguing system, the introduction of ISBNs, bar codes and the

emergence of Nielsen BookScan, has made reader tastes increasingly knowable. The data streams produced by Amazon's recommendation engines which scan over one billion gigabytes of customer data (Matthews), are a new step in this progression and are transformative of the literary field because they are tastemakers in their own right. Thirty-five percent of Amazon's sales are driven by its recommendation engines (MacKenzie et al.). Amazon's Prime subscription customers, who spend more than the average Amazon user, are important targets for such systems such as, for example, the approximately six million Prime subscribers who use Prime Reading, a subscription reading service (Montgomery). In effect, Amazon have created a proprietary alternative literary field based on user data and made publicly visible via their recommendation engines, their bestseller and most read lists, and through internal and external marketing of their Prime subscription ecosystem. As one US literary agent has said, 'They aren't gaming the system. They own the system' (Trachtenberg).

Amazon is at the same time a major publisher in its own right, even if its impact is often underappreciated in part because it has developed its own algorithmically connected ecosystem of authors and audiences more or less out of sight of the traditional literary field. Amazon published 1,231 books under 15 imprints in the US in 2017, which many traditional bookstores refuse to stock and which don't appear in conventional bestseller lists. Instead the company focuses on promoting its books to its user base. For example, new Amazon-published titles are promoted on Amazon First Reads, and to seven million US subscribers of its monthly email bulletin. Together with Amazon Kindle Unlimited's promotional tools over 10 million readers can be reached directly, who are able to then easily download or order the new title. Titles are also promoted to over 100 million Prime members worldwide, with US members getting a free First Reads pick each month (Trachtenberg). This proprietary ecosystem extends well beyond book publishing and is part of Amazon's strategy to cultivate higher-spending Prime subscribers. As Amazon CEO Jeff Bezos has said of Amazon's subscription video streaming service, 'When we win a Golden Globe, it helps us sell more shoes' (Montgomery).

Amazon's Kindle ebook reader has also created its own publishing ecosystem. In 2019 authors who self-published ebooks that were included in Amazon's Kindle Unlimited ebook subscription service collectively earned over US\$300 million (Milliott). To be included on Kindle Unlimited authors have to grant exclusivity to Amazon, making their career prospects entirely depended on the company, which has created its own star system of self-published authors who are promoted on lists such as Kindle Unlimited Allstars. The Kindle, which makes what you were reading unknown to an observer but known to Amazon via its Whispersync link to the reader's user account, has also helped reveal the hitherto unacknowledged popularity of genre reading, which has changed opportunity structures for authors. As McGurl notes,

Indeed, noticing the recent mass migration of otherwise 'literary' writers into the space of genre, one might go as far as to say that fiction in the Age of Amazon is genre fiction, a highly gendered and age-differentiated genre system complexly structured by the poles of epic and romance and their characteristic modes of wish fulfillment. (459-60)

Amazon's opportunity structures reward authors who write in genres such as romance and mystery because fans of these genres are often voracious readers. They also reward authors who take an industrialised approach to self-publishing which also has a transformative effect on what is published. Authors who 'rapid release' by publishing a book at least every 60 days are given more prominence by Amazon's algorithms and greater marketing exposure. Those who write longer books benefit because Kindle Unlimited pays according to page turns, which has led to 'book stuffing', that is, making books unnecessarily long (Flood). Authors report working 12-hour days and seven-day weeks to produce up to three novels per month in some cases because the sheer number of pages turned improves their chances of becoming a most-read author, which results in multi-thousand dollar bonuses from Amazon (Semuels).

The rise of self-publishing and newly revealed popularity of genre fiction has helped Amazon undermine established book publishers. In 2014 Harper-Collins sought to capitalise on the growth of genre publishing by buying romance publisher Harlequin. In 2019 Harper-Collins was among a number of genre publishers that wound back their romance publishing with some citing market pressure from KDP and the dominance of independent self-published romance authors. US industry observers note that US adult fiction sales fell 16 per cent between 2013 and 2017, which they attribute in part to the effect of low-priced books published by Amazon and by self-published authors on Amazon's KDP platform (Trachtenberg).

3. Enclosure

Third, another effect of the platformisation of culture is to draw new practices into the market. Platforms thus work to facilitate the *enclosure* of goods and processes formerly outside the market, a process facilitated by their digitisation and transformation into proprietary code. Mark Andrejevic's notion of 'digital enclosure' is useful here. As he explains:

The use of the term *digital enclosure* is also meant to evoke the land enclosure movement associated with the transition from feudalism to capitalism, the process whereby over time communal land was subject

to private control, allowing private landowners to set the conditions for its use. Over time the enclosure movement leads to the formation of distinct classes: those who own the means of production and those who must sell their labor for access to these means, whether arable land or factories. A similar division of groups can be discerned in the emerging digital enclosure between those who control privatized interactive spaces (virtual or otherwise), and those who submit to particular forms of monitoring in order to gain access to goods, services, and conveniences. (3)

This logic of enclosure blurs the traditional divide between public and private. On the one hand, platform logic encloses activities that were formerly private and renders them into markets, for example the creation of new markets for homemade hand-knits on craft platform Etsy; on the other hand it encloses public culture by moving public exchanges into a privatised domain where all interactions, including those freely made as part of the 'sharing economy', happen within the platform and are part of its business model.

In the case of Amazon, one activity that was previously performed more or less outside the market and that has been brought into the market, is reading. Reading has always been a commodity to the extent that it generates social and cultural capital transferable into class and professional mobility. Reading has since the eighteenth century nevertheless been considered a paradigmatically private leisure activity, emblematic of solitude. Digital technology has made the hitherto unknown actions of private readers measurable and marketable. Amazon's datafied commodification of reading includes its online reader reviews, which leverage the volunteered labor of book readers into content that adds value to the Amazon online store and that helps make Amazon.com a 'sticky' platform where users linger. These user-generated reviews create a pseudo-public sphere in a privately-owned online space and are a marketing tool used by Amazon to draw people to its site.

For users of Amazon's Kindle, too, the reading of books is commodified. Amazon's proprietary 'Whispersync' software, used on their Kindle e-readers, allows consumers to synchronise their reading across multiple devices. It is also able to track such things as what they read, at what speed they read, at what time of day they read, how many titles they are reading simultaneously and in what genres, and at what point they ceased reading any uncompleted book. While big data analytics lack precision when it comes to understanding precisely how people are reading (Rowberry), the data produced by such tracking is nevertheless a commodity with market value based on its perceived insights into reader behaviour, not least since it can be aggregated with big data provided by users across Amazon platforms and third-party platforms that Amazon draws data from,

thus potentially matching reading behaviour against other forms of interaction, such as audiobook listening, Prime video watching, use of Amazon's Go convenience stores, or use of the Amazon's Alexa application, to give a holistic, monetisable understanding of customer behaviour.

In 2013 Amazon extended its reach into online forums with the purchase of popular social reading site Goodreads.com, which at the time had over 16 million members (and many more viewers; numbers have since grown). Its purchase by Amazon can be understood as part of a vertical integration strategy by the firm to control all facets of online book consumption. Here the reading activities of Goodreads users is commodified through their provision of content that, again, feeds into Amazon's vast data pool. As Lisa Nakamura writes of Goodreads, 'By submitting our favourite book titles, readerly habits, ratings, comments, and replies . . . to our social network of readers, we are both collecting and being collected under a new regime of controlled consumerism' (241).

Another site of enclosure is the publishing field itself. Every interaction across Amazon's book platforms is owned by Amazon is enclosed within proprietary 'black boxes' such that users are unable to know the meanings given to their activity.

4. *Surveillance*

Fourth, *surveillance* is a foundational activity of cultural platforms. As Andrejevic argues, the logic of digital enclosure involves

the creation of an interactive realm wherein every action and transaction generates information about itself... Accompanying this movement is a not-so-subtle shift in social relations: entry to the digital enclosure carries with it, in most cases, the condition of surveillance.
(2)

Google and Facebook, which now dominate the global advertising market, are able to do so because of their ability to harvest information from every interaction that takes place on their platforms and far beyond them. For example, depending on how a user's privacy settings and location tracking are set, Google stores their location every time they activate their phone, keeps a record of everything users have ever searched, of all bookmarks, emails, YouTube visits, and photos taken, and stores information on every app and extension they use (including, non-Google apps), and where they are used, how often they are used for, and who users interact with (Curran).

One purpose of this surveillance is to enhance platform's ability to target users directly so as to enhance transactions and create a pool of data that is itself a marketable commodity. As Andrejevic says,

In a way, when we're buying books on Amazon.com, surfing the web, or connecting to commercial wireless networks, Frederick Taylor's is the spirit of surveillance in the machine, watching over us, keeping track of our every move, noting it down, and finding ways to use that information to encourage us to consume as much as possible. (52)

Amazon, like most web companies, not only collects data from customers but specifically designs services for the purpose of collecting more data (West 28). Amazon tracks all visitors to its websites, as well as visits of Amazon account holders to other websites via cookies and other tracking software, and records things such as time spent, mouse hovers, almost purchases, and purchases. The data generated is added to customer profiles and supplements the pool of big data that powers Amazon's recommendation engines as well as such things as Amazon's recently patented anticipatory shipping service, that will use big data to predict future customer orders (Nichols). Amazon's Prime program provides a further avenue for the capture of user data, keeping them within the Amazon ecosystem as often and for as long as possible to maximise opportunities for tracking.

Like other tech companies such as Google, Amazon produces hardware in part to facilitate its tracking efforts. As mentioned above, Amazon's Kindle closely tracks reader behaviour. Amazon's approach to surveillance can be seen in the design of their Kindle Fire, launched in 2011, which attracted considerable attention for its capacity, via its standard Silk web-browser, to track users who agreed to the standard user agreement not only when they use Amazon's home pages, but across all their browsing (Liebowitz). This included giving Silk permission to route all data through an Amazon proxy server where information about user browsing habits such as sites visited and for how long, is collected and stored, including data harvested from users' social media profiles on sites such as Twitter and Facebook.

Another example of Amazon's surveillance reach is its physical bookstores, which it began opening across the US in 2015. While it might seem odd that an online bookseller should open physical bookstores, once the bookstores are understood in terms of platform strategies the move to bricks-and-mortar retailing makes sense. As one journalist explained after the opening of the first store:

Under the hood, the Amazon store has a few unusual features. Every book has a shelf tag that includes a capsule review from the website, a star rating, and a barcode. There are no prices listed. To get the price,

you scan the code with the camera of your smartphone and the Amazon app... This brings up the product page for the item you're looking at, with full reviews, specs and pricing. (Salkowitz)

Once signed into the app, Amazon aligns a customer's presence in the store and browsing behavior with their online records, including previous buying history, online browsing habits, Prime membership status, and so on. Based on this data the app can make recommendations and set the price of the book being browsed, including offering incentives to help finalise the sale.

In effect Amazon's bricks-and-mortar bookstores are network nodes in the Amazon platform, linked to other nodes in the network. Amazon is thus able to track its users across their online and offline consumption, including data gathered from their Kindle reading, their online browsing, their Goodreads data, their movie watching on Amazon Prime, their Amazon Music audio streaming, their Audible audiobook listening, to data gathered by Alexa, Amazon's digital assistant, to data gathered by the Amazon Rekognition facial recognition technology used in Amazon's Ring video doorbell, to data gathered by Echo Look, the Amazon camera and styling assistant, to visits to its Go convenience stores. This data contributes to further product development aimed at capturing still more data. As Emily West has argued,

Fundamentally, Amazon offers to serve us by *knowing* us, including the domestic, private side of ourselves represented by our product searches, our purchases, the media we consume, and now with Alexa, what we say and how we say it. (West)

5. Capture

Fifth, digital cultural platforms enact a logic of *capture*. That is, they seek to capture their markets, including buyers and sellers, and keep them confined within the platform for as long as possible. As Nieborg and Poell argue, following (Bucher, 2012),

Content developers are increasingly 'locked in,' as they are not only reliant on platform-data, but they also have their training, tools, and payment systems fully integrated with platforms. Algorithmic sorting practices, such as seen in Facebook's News Feed, further enhance this dependency, introducing new regimes of visibility to complementors. (4288)

One effect of this is that 'As cultural production is becoming increasingly platform dependent, the autonomy and economic sustainability of particular forms of

cultural production is increasingly compromised' (4276-7). Such producers can become dependent on a given platform, as seen in the dominance of Soundcloud as a platform for unsigned musicians. Producers are at the same time vulnerable to, and held captive by, changing terms and conditions enacted by platforms, as seen for example in the impact of Facebook algorithm changes on news producers.

In many cases platforms are able to enact this capture because they have successfully leveraged first mover advantage and harnessed 'winner take all' effects that can subsequently come into play, 'ultimately allowing a platform to aggregate a disproportionate amount of users, revenue, and/or profit (Nieborg and Poell 4278). They are thus able to exert control over entire markets. This logic of capture, which ensnares users and producers, enables platforms to become self-contained ecosystems and to operate both as monopoly and monosopoly. That is, they can function as a disproportionately dominant seller in a particular market because sufficient customers are marshalled within their 'walled garden' and can also function as a disproportionately dominant buyer because suppliers with something to sell (for example, their labour), have little choice but to use the one buyer. These effects can be seen, for example, in Uber's domination of the ride share market in many western nations. It is through this power to dominate all market interactions in any given sector that digital platforms have become a defining form.

Amazon has used its 'first mover advantage' to become a dominant cultural player. It established an early lead as an online retailer on the back of book sales, with books chosen as the start-up product because of their non-fungibility (Stone). This irreplaceability itself enabled Amazon to work towards market capture through relentless discounting, supported by venture capital and the rapid building of scale, without fear of lower spec competition entering the market. Amazon's scale as a bookseller enabled it to quickly capture the ebook market with a product not significantly different to earlier ebook readers (Sony produced the first commercial E Ink ebook reader in 2004), but which was heavily discounted and leveraged Amazon's existing user base. Amazon now dominates the ebook market, with around 83 per cent US market share (Cheng). The company has at the same time used its market domination to keep ebook prices low, and by extension put pressure on physical book prices. In effect Amazon uses KDP to gain ebook market share and set terms back to the publishing industry by competing directly for manuscripts and readers. Kindle Unlimited functions as a 'walled garden' for self-published authors who are tied to it by exclusivity agreements and for readers who gain access to books very cheaply, driving down price expectations (Semuels). Amazon's Audible audiobook business has been built using a similar strategy, by leveraging existing market power and scale. Amazon's Prime program is a logical extension of this strategy and enhances the potential for capture by offering as

many incentives as possible for customers to stay within the Amazon 'walled garden', which drives sales and helps build its data pool.

Even when the company has not enjoyed direct first mover advantage in one market it is able to move to dominate markets because of its size. For example, Amazon's recent move into the advertising supported free streaming music arena puts it in direct competition with Spotify. Amazon, however, is able to leverage its service off its other platforms such as its Alexa home assistant platform, to build rapid market share off an existing user base (Deahl).

Conclusion: 'Post-Platform'?

The above processes are enacted in ways that complicate theories of platform capitalism. They are at the outset post-digital processes since Amazon's business activities combine material, human and virtual components. Such processes, too, are post-digital in that they are always incomplete and are often resisted in ways that highlight gaps in actual existing digital practice. For example, Claire Squires (Squires) has described the ways in which big data approaches to quantification and enumeration are resisted by many editors and publishers, who prefer to rely on taste. As Simon Rowberry has shown, the surveillance mechanisms built into ebooks are imprecise and 'fail to capture the complete reading process from viewing characters to decoding and interpreting the text's meaning' (237-8). Similarly, the proliferation of online 'book talk' on apps such as Twitter has highlighted, not diminished, the social function of literary festivals (Driscoll). As Simone Murray has argued, 'literary discourse and its characteristic dispositions continue to shape the nature and norms of online book talk, rendering it distinct from online discussion of other cultural forms' (3).

Amazon has nevertheless thrived in an environment where network discourse functions as an episteme, that is, as a 'system for organizing knowledge about the world' (Mejias 9). At the heart of all these practices is a relentless logic of quantification and commodification consistent with mythic conceptions of the power of markets and neoliberal ideological imperatives to transform social relations to market transactions. Tech companies now occupy the majority of top places in rankings of the value of global brands (Apple, Google and Amazon make up the top three), having displaced traditional industrial companies like General Electric, Amatil and General Motors (Interbrand). Traditional industrial companies such as car manufacturers are remodelling themselves as platforms, and act as network hubs for cars which are becoming platform-like, oriented around screen logic, apps such as Apple car-play, and driver assistance and monitoring capabilities that track user driving habits via back-to-base surveillance and guidance systems. Governments, too, are adopting platform logics, as seen most strikingly in the Chinese government's social credit system or

the related Sesame Credit system, a creditworthiness measurement system launched by an affiliate of Ali Baba in response to new government policy, both of which seek to manage citizens using surveillance techniques linked to points systems and rewards (Chong).

As Striphas has argued, following Bruno Latour, algorithms 'have significantly taken on... one of culture's chief responsibilities, namely, the task of "reassembling the social"' ('Algorithmic Culture' 406). In Amazon's case this has involved assembling their own proprietary publishing sphere with its own audiences, retail channels, hierarchies of value and people, systems of valorisation, and rules, through the processes outlined above. If this platformisation of cultural production and its creation of proprietary marketplaces and publishing spheres might seem undemocratic, hostile to basic human rights and dignity, indifferent to commercial fair play, and, indeed, a long way from established understandings of the book as a knowledge artefact, then they prompt a post-digital social project to 'reassemble the social' in a different way. That is, to undo the myths of digital determinism and digital capitalism to reveal and reinstate the ways in which digital processes are always at base human.

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